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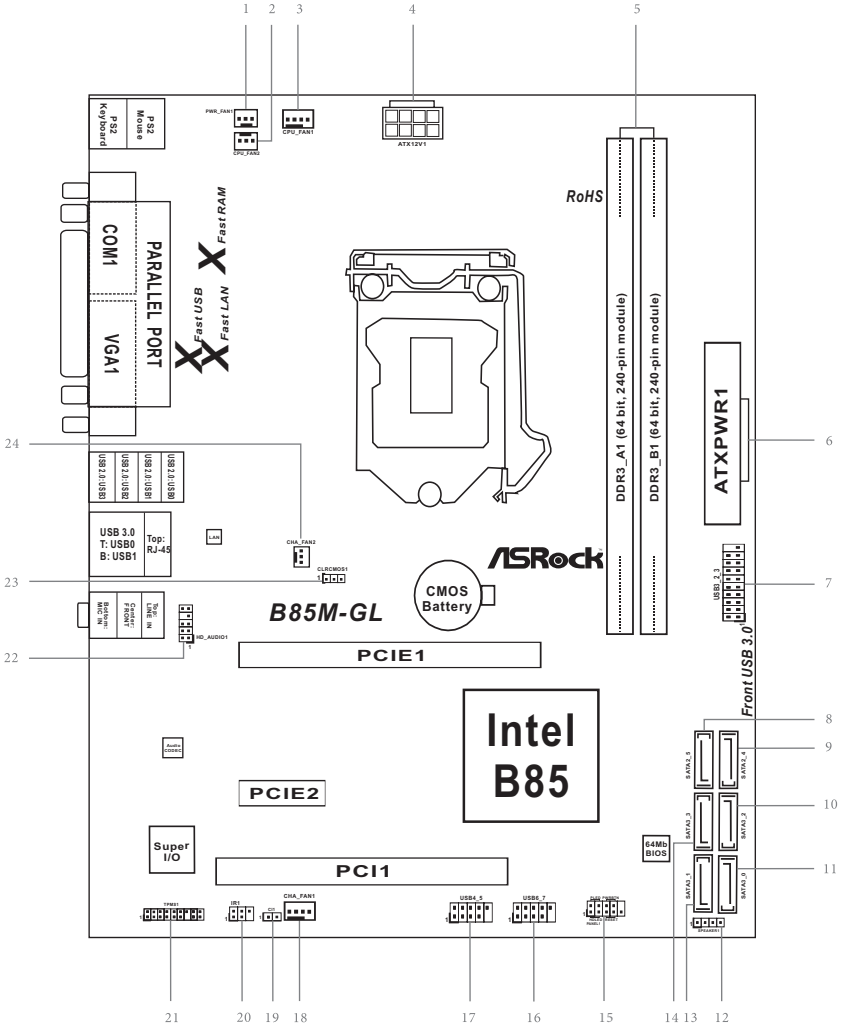
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

CALIFORNIA, USA ONLY

The Lithium battery adopted on this motherboard contains Perchlorate, a toxic substance controlled in Perchlorate Best Management Practices (BMP) regulations passed by the California Legislature. When you discard the Lithium battery in California, USA, please follow the related regulations in advance.
"Perchlorate Material-special handling may apply, see www.dtsc.ca.gov/hazardouswaste/perchlorate"

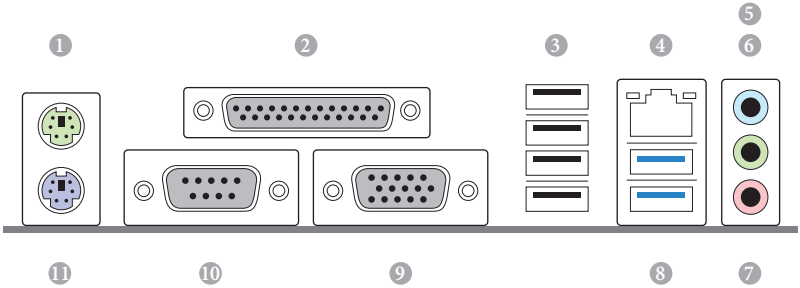
ASRock Website: http://www.asrock.com

Motherboard Layout



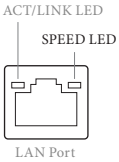
No.	Description
1	Power Fan Connector (PWR_FAN1)
2	CPU Fan Connector (CPU_FAN2)
3	CPU Fan Connector (CPU_FAN1)
4	ATX 12V Power Connector (ATX12V1)
5	2 x 240-pin DDR3 DIMM Slots (DDR3_A1, DDR3_B1)
6	ATX Power Connector (ATXPWR1)
7	USB 3.0 Header (USB3_2_3)
8	SATA2 Connector (SATA2_5)
9	SATA2 Connector (SATA2_4)
10	SATA3 Connector (SATA3_2)
11	SATA3 Connector (SATA3_0)
12	Chassis Speaker Header (SPEAKER1)
13	SATA3 Connector (SATA3_1)
14	SATA3 Connector (SATA3_3)
15	System Panel Header (PANEL1)
16	USB 2.0 Header (USB6_7)
17	USB 2.0 Header (USB4_5)
18	Chassis Fan Connector (CHA_FAN1)
19	Chassis Intrusion Header (CI1)
20	Infrared Module Header (IR1)
21	Print Port Header (LPT1)
22	Front Panel Audio Header (HD_AUDIO1)
23	Clear CMOS Jumper (CLRCMOS1)
24	Chassis Fan Connector (CHA_FAN2)

I/O Panel



No.	Description	No.	Description
1	PS/2 Mouse Port	7	Microphone (Pink)
2	Parallel Port	8	USB 3.0 Ports (USB3_01)
3	USB 2.0 Ports (USB0123)	9	DVI-D Port
4	LAN RJ-45 Port*	10	COM Port
5	Line In (Light Blue)	11	PS/2 Keyboard Port
6	Front Speaker (Lime)		

** There are two LEDs on each LAN port. Please refer to the table below for the LAN port LED indications.*



Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Orange	100Mbps connection
On	Link	Green	1Gbps connection

Chapter 1 Introduction

Thank you for purchasing ASRock B85M-GL motherboard, a reliable motherboard produced under ASRock's consistently stringent quality control. It delivers excellent performance with robust design conforming to ASRock's commitment to quality and endurance.

Because the motherboard specifications and the BIOS software might be updated, the content of this documentation will be subject to change without notice. In case any modifications of this documentation occur, the updated version will be available on ASRock's website without further notice. If you require technical support related to this motherboard, please visit our website for specific information about the model you are using. You may find the latest VGA cards and CPU support list on ASRock's website as well. ASRock website http://www.asrock.com.

1.1 Package Contents

- ASRock B85M-GL Motherboard (Micro ATX Form Factor)
- ASRock B85M-GL Quick Installation Guide
- ASRock B85M-GL Support CD
- 2 x Serial ATA (SATA) Data Cables (Optional)
- 1 x I/O Panel Shield

1.2 Specifications

Platform	• Micro ATX Form Factor • All Solid Capacitor design
CPU	• Supports 4th Generation Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® in LGA1150 Package • Digi Power Design • 4 Power Phase Design • Supports Intel® Turbo Boost 2.0 Technology
Chipset	• Intel® B85 • Supports Intel® Small Business Advantage 2.0
Memory	• Dual Channel DDR3 Memory Technology • 2 x DDR3 DIMM slots • Supports DDR3 1600/1333/1066 non-ECC, un-buffered memory • Max. capacity of system memory: 16GB (see CAUTION) • Supports Intel® Extreme Memory Profile (XMP)1.3/1.2
Expansion Slot	• 1 x PCI Express 3.0 x16 slot (PCIE1: x16 mode) • 1 x PCI Express 2.0 x1 slot • 1 x PCI slot
Graphics	• Intel® HD Graphics Built-in Visuals and the VGA outputs can be supported only with processors which are GPU integrated. • Supports Intel® HD Graphics Built-in Visuals : Intel® Quick Sync Video with AVC, MVC (S3D) and MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • Max. shared memory 1792MB • Supports D-Sub with max. resolution up to 1920x1200 @ 60Hz

Audio	• 5.1 CH HD Audio (Realtek ALC662 Audio Codec) • TI® NE5532 Premium Headset Amplifier (supports up to 600 Ohms headsets)
LAN	• PCIE x1 Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111G • Supports Wake-On-LAN • Supports LAN Cable Detection • Supports Energy Efficient Ethernet 802.3az • Supports PXE
Rear Panel I/O	• 1 x PS/2 Mouse Port • 1 x PS/2 Keyboard Port • 1 x Serial Port: COM1 • 1 x Parallel Port (ECP/EPP support) • 1 x D-Sub Port • 4 x USB 2.0 Ports • 2 x USB 3.0 Ports • 1 x RJ-45 LAN Port with LED (ACT/LINK LED and SPEED LED) • HD Audio Jack: Line in / Front Speaker / Microphone
Storage	• 4 x SATA3 6.0 Gb/s connectors, support NCQ, AHCI and "Hot Plug" functions • 2 x SATA2 3.0 Gb/s connectors, support NCQ, AHCI and "Hot Plug" functions
Connector	• 1 x IR header • 1 x Chassis Intrusion header • 1 x TPM header • 2 x CPU Fan connectors (1 x 4-pin, 1 x 3-pin) • 2 x Chassis Fan connectors (1 x 4-pin, 1 x 3-pin) • 1 x Power Fan connector (3-pin) • 1 x 24 pin ATX power connector • 1 x 8 pin 12V power connector • 1 x Front panel audio connector • 2 x USB 2.0 headers (support 4 USB 2.0 ports)

	• 1 x USB 3.0 header (supports 2 USB 3.0 ports)
BIOS Feature	• 64Mb AMI UEFI Legal BIOS with Multilingual GUI support • ACPI 1.1 Compliance Wake Up Events • SMBIOS 2.3.1 Support • CPU, DRAM, PCH 1.05V, PCH 1.5V Voltage Multi-adjustment
Support CD	• Drivers, Utilities, AntiVirus Software (Trial Version), CyberLink MediaEspresso 6.5 Trial, Google Chrome Browser and Toolbar, Start8
Hardware Monitor	• CPU/Chassis/Power Temperature Sensing • CPU/Chassis/Power Fan Tachometer • CPU/Chassis Quiet Fan (Allow Chassis Fan Speed Auto-Adjust by CPU Temperature) • CPU/Chassis Fan Multi-Speed Control • CASE OPEN detection • Voltage Monitoring: +12V, +5V, +3.3V, CPU Vcore
OS	• Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit compliant
Certifications	• FCC, CE, WHQL • ErP/EuP Ready (ErP/EuP ready power supply is required)

** For detailed product information, please visit our website: http://www.asrock.com*

Please realize that there is a certain risk involved with overclocking, including adjusting the setting in the BIOS, applying Untied Overclocking Technology, or using third-party overclocking tools. Overclocking may affect your system's stability, or even cause damage to the components and devices of your system. It should be done at your own risk and expense. We are not responsible for possible damage caused by overclocking.

Due to limitation, the actual memory size may be less than 4GB for the reservation for system usage under Windows® 32-bit operating systems. Windows® 64-bit operating systems do not have such limitations. You can use ASRock XFast RAM to utilize the memory that Windows® cannot use.

1.3 Unique Features

ASRock A-Tuning

A-Tuning is ASRock's multi purpose software suite with a new interface, more new features and improved utilities, including XFast RAM, Dehumidifier, Good Night LED, FAN-Tastic Tuning, OC Tweaker and a whole lot more.

ASRock Instant Flash

ASRock Instant Flash is a BIOS flash utility embedded in Flash ROM. This convenient BIOS update tool allows you to update the system BIOS in a few clicks without preparing an additional floppy diskette or other complicated flash utility. Just save the new BIOS file to your USB storage and launch this tool by pressing <F6> or <F2> during POST to enter the BIOS setup menu to access ASRock Instant Flash. Please be noted that the USB flash drive or hard drive must use FAT32/16/12 file system.

ASRock APP Charger

Simply by installing the ASRock APP Charger makes your iPhone/iPad/iPod Touch charge up to 40% faster than before on your computer. ASRock APP Charger allows you to quickly charge many Apple devices simultaneously and even supports continuous charging when your PC enters into Standby mode (S1), Suspend to RAM (S3), hibernation mode (S4) or power off (S5).

ASRock XFast USB

ASRock XFast USB can boost the performance of your USB storage devices. The performance may depend on the properties of the device.

ASRock XFast LAN

ASRock XFast LAN provides faster internet access, which includes the benefits listed below. LAN Application Prioritization: You can configure your application's priority ideally and add new programs to the list. Lower Latency in Game: After setting online game's priority higher, it can lower the latency in games. Traffic Shaping: You can watch Youtube HD videos and download simultaneously. Real-Time Analysis of Your Data: With the status window, you can easily recognize which data streams you are currently transferring.

ASRock XFast RAM

ASRock XFast RAM is included in A-Tuning. It fully utilizes the memory space that cannot be used under Windows® 32-bit operating systems. ASRock XFast RAM shortens the loading time of previously visited websites, making web surfing faster than ever. And it also boosts the speed of Adobe Photoshop 5 times faster. Another advantage of ASRock XFast RAM is that it reduces the frequency of accessing your SSDs or HDDs in order to extend their lifespan.

ASRock Crashless BIOS

ASRock Crashless BIOS allows users to update their BIOS without fear of failing. If power loss occurs during the BIOS updating process, ASRock Crashless BIOS will automatically finish the BIOS update procedure after regaining power. Please note that BIOS files need to be placed in the root directory of your USB disk. Only USB 2.0 ports support this feature.

ASRock OMG (Online Management Guard)

Administrators are able to establish an internet curfew or restrict internet access at specified times via OMG. You may schedule the starting and ending hours of internet access granted to other users. In order to prevent users from bypassing OMG, guest accounts without permission to modify the system time are required.

ASRock Internet Flash

ASRock Internet Flash downloads and updates the latest UEFI firmware version from our servers for you without entering Windows® OS. Please setup network configuration before using Internet Flash.

ASRock System Browser

ASRock System Browser shows the overview of your current PC and the devices connected.

ASRock Dehumidifier Function

Users may prevent motherboard damages due to dampness by enabling "Dehumidifier Function". When enabling Dehumidifier Function, the computer will power on automatically to dehumidify the system after entering S4/S5 state.

ASRock Easy Driver Installer

For users that don't have an optical disk drive to install the drivers from our support CD, Easy Driver Installer is a handy tool in the UEFI that installs the LAN driver to your system via an USB storage device, then downloads and installs the other required drivers automatically.

ASRock Interactive UEFI

ASRock Interactive UEFI is a blend of system configuration tools, cool sound effects and stunning visuals. The unprecedented UEFI provides a more attractive interface and more amusment.

ASRock Fast Boot

With ASRock's exclusive Fast Boot technology, it takes less than 1.5 seconds to logon to Windows 8 from a cold boot. No more waiting! The speedy boot will completely change your user experience and behavior.

ASRock Restart to UEFI

Windows® 8 brings the ultimate boot up experience. The lightning boot up speed makes it hard to access the UEFI setup. ASRock Restart to UEFI allows users to enter the UEFI automatically when turning on the PC. By enabling this function, the PC will enter the UEFI directly after you restart.

ASRock USB Key

In a world where time is money, why waste precious time everyday typing usernames to log in to Windows? Why should we even bother memorizing those foot long passwords? Just plug in the USB Key and let your computer log in to windows automatically!

ASRock FAN-Tastic Tuning

ASRock FAN-Tastic Tuning is included in A-Tuning. Configure up to five different fan speeds using the graph. The fans will automatically shift to the next speed level when the assigned temperature is met.

ASRock Good Night LED

ASRock Good Night LED technology offers you a better sleeping environment by extinguishing the unessential LEDs. By enabling Good Night LED in the BIOS, the Power/HDD/LAN LEDs will be switched off when the system is powered on. Good Night LED will automatically switch off the Power and Keyboard LEDs when the system enters into Standby/Hibernation mode as well.

Chapter 2 Installation

This is a Micro ATX form factor motherboard. Before you install the motherboard, study the configuration of your chassis to ensure that the motherboard fits into it.

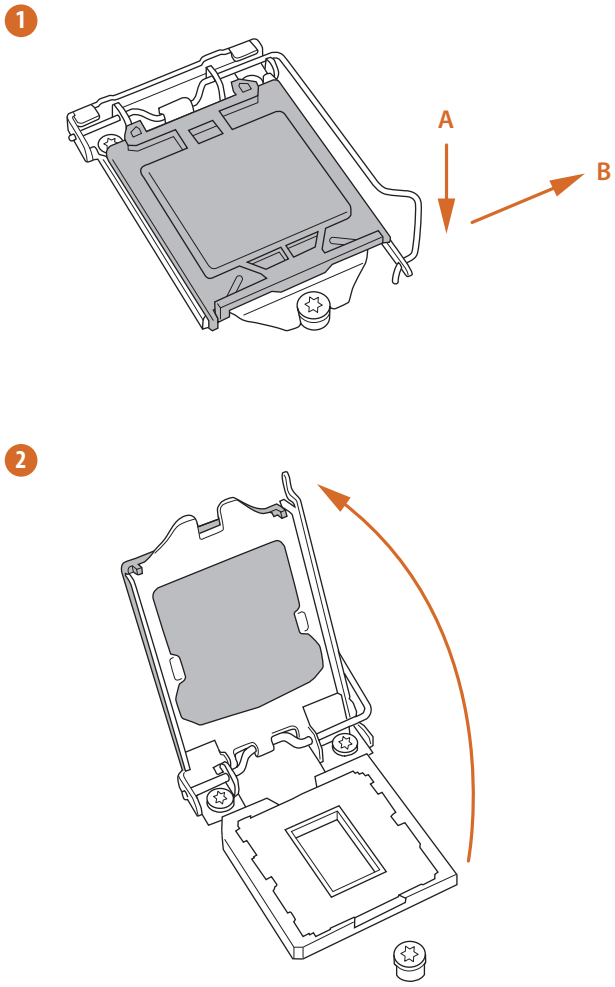
Pre-installation Precautions

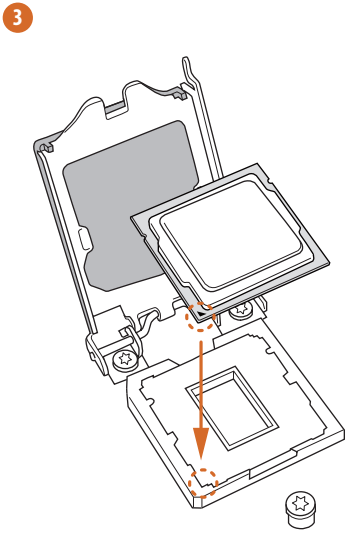
Take note of the following precautions before you install motherboard components or change any motherboard settings.

- Make sure to unplug the power cord before installing or removing the motherboard. Failure to do so may cause physical injuries to you and damages to motherboard components.
- In order to avoid damage from static electricity to the motherboard's components, NEVER place your motherboard directly on a carpet. Also remember to use a grounded wrist strap or touch a safety grounded object before you handle the components.
- Hold components by the edges and do not touch the ICs.
- Whenever you uninstall any components, place them on a grounded anti-static pad or in the bag that comes with the components.
- When placing screws to secure the motherboard to the chassis, please do not over-tighten the screws! Doing so may damage the motherboard.

2.1 Installing the CPU

1. *Before you insert the 1150-Pin CPU into the socket, please check if the **PnP cap** is on the socket, if the CPU surface is unclean, or if there are any **bent pins** in the socket. Do not force to insert the CPU into the socket if above situation is found. Otherwise, the CPU will be seriously damaged.*
2. *Unplug all power cables before installing the CPU.*

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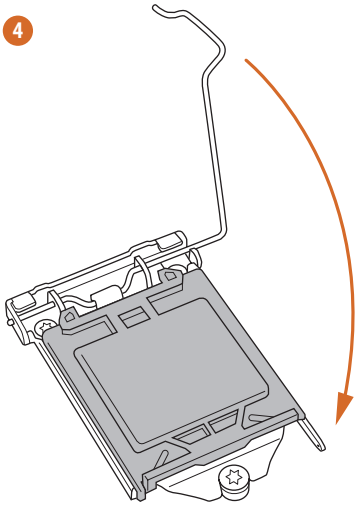
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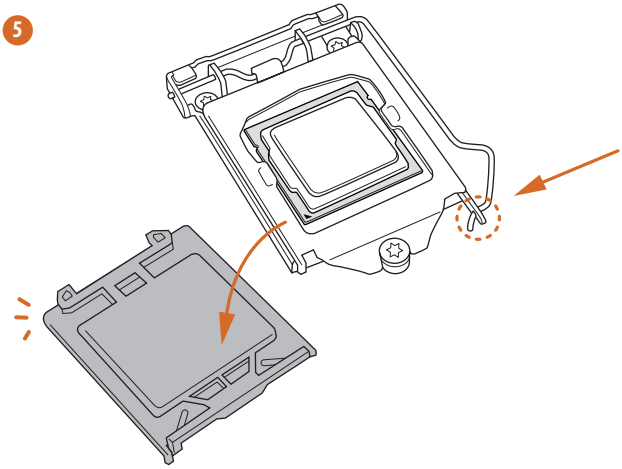
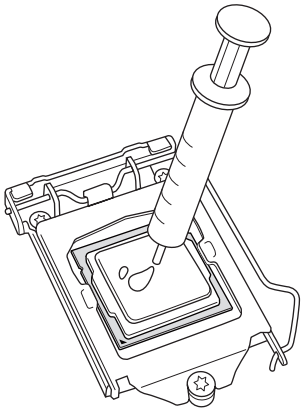
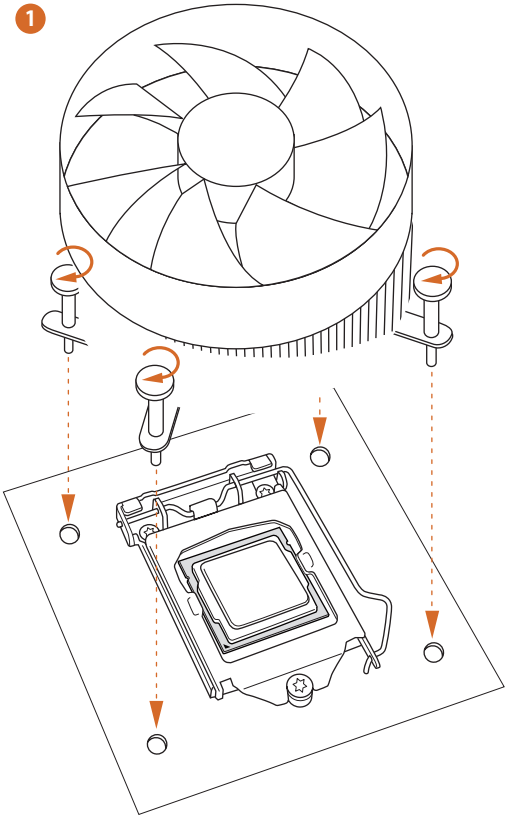
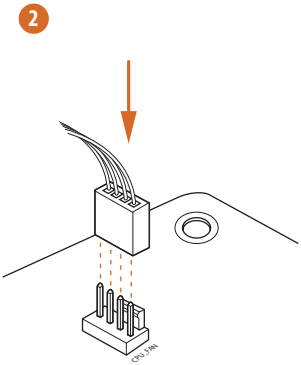

5

Please save and replace the cover if the processor is removed. The cover must be placed if you wish to return the motherboard for after service.

2.2 Installing the CPU Fan and Heatsink







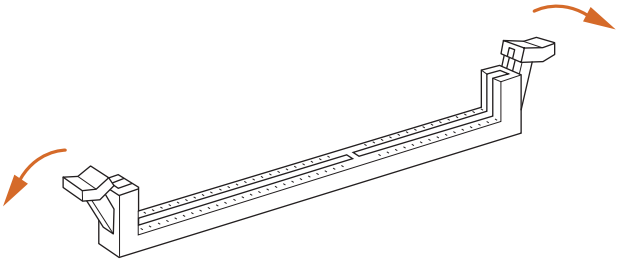
2.3 Installing Memory Modules (DIMM)

This motherboard provides two 240-pin DDR3 (Double Data Rate 3) DIMM slots, and supports Dual Channel Memory Technology.

1. *For dual channel configuration, you always need to install identical (the same brand, speed, size and chip-type) DDR3 DIMM pairs.*
2. *It is unable to activate Dual Channel Memory Technology with only one memory module installed.*
3. *It is not allowed to install a DDR or DDR2 memory module into a DDR3 slot; otherwise, this motherboard and DIMM may be damaged.*

The DIMM only fits in one correct orientation. It will cause permanent damage to the motherboard and the DIMM if you force the DIMM into the slot at incorrect orientation.

1



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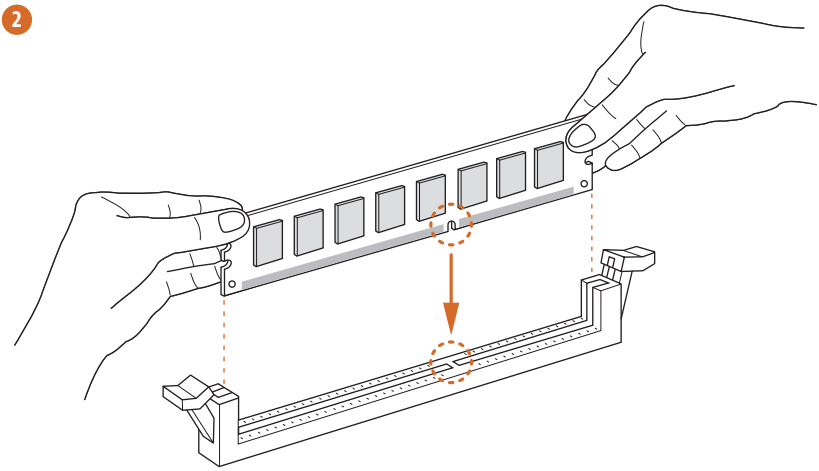

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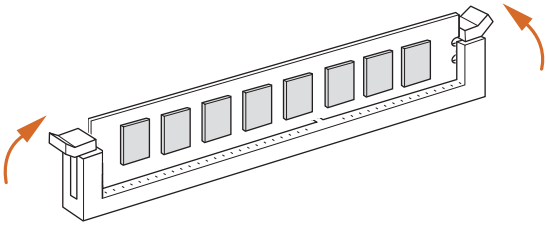


2.4 Expansion Slots (PCI and PCI Express Slots)

There is 1 PCI slot and 2 PCI Express slots on the motherboard.

Before installing an expansion card, please make sure that the power supply is switched off or the power cord is unplugged. Please read the documentation of the expansion card and make necessary hardware settings for the card before you start the installation.

PCI slot:

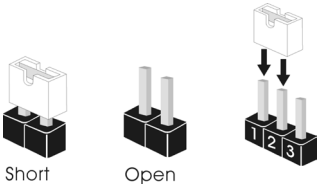
The PCI1 slot is used to install expansion cards that have 32-bit PCI interface.

PCIe slots:

PCIE1 (PCIe 3.0 x16 slot) is used for PCI Express x16 lane width graphics cards.
PCIE2 (PCIe 2.0 x1 slot) is used for PCI Express x1 lane width graphics cards.

2.5 Jumpers Setup

The illustration shows how jumpers are setup. When the jumper cap is placed on the pins, the jumper is "Short". If no jumper cap is placed on the pins, the jumper is "Open". The illustration shows a 3-pin jumper whose pin1 and pin2 are "Short" when a jumper cap is placed on these 2 pins.



Clear CMOS Jumper (CLRCMOS1) (see p.1, No. 23)	1_2 Default	2_3 Clear CMOS

CLRCMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLRCMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, and user default profile will be cleared only if the CMOS battery is removed.

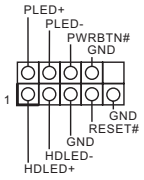
If you clear the CMOS, the case open may be detected. Please adjust the BIOS option "Clear Status" to clear the record of previous chassis intrusion status.

English

2.6 Onboard Headers and Connectors

Onboard headers and connectors are NOT jumpers. Do NOT place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage to the motherboard.

System Panel Header
(9-pin PANEL1)
(see p.1, No. 15)



Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.

PWRBTN (Power Switch):
Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.

RESET (Reset Switch):
Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart.

PLED (System Power LED):
Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S1/S3 sleep state. The LED is off when the system is in S4 sleep state or powered off (S5).

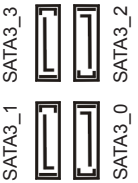
HDLED (Hard Drive Activity LED):
Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

Serial ATA2 Connectors
(SATA2_4:
see p.1, No. 9)
(SATA2_5:
see p.1, No. 8)

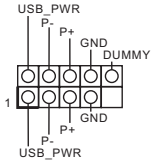
These two SATA2 connectors support SATA data cables for internal storage devices with up to 3.0 Gb/s data transfer rate.

Serial ATA3 Connectors
(SATA3_0:
see p.1, No. 11)
(SATA3_1:
see p.1, No. 13)
(SATA3_2:
see p.1, No. 10)
(SATA3_3:
see p.1, No. 14)



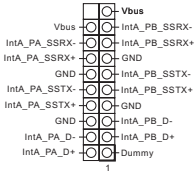
These four SATA3 connectors support SATA data cables for internal storage devices with up to 6.0 Gb/s data transfer rate.

USB 2.0 Headers
(9-pin USB4_5)
(see p.1, No. 17)
(9-pin USB6_7)
(see p.1, No. 16)



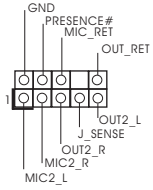
Besides four USB 2.0 ports on the I/O panel, there are two headers on this motherboard. Each USB 2.0 header can support two ports.

USB 3.0 Header
(19-pin USB3_2_3)
(see p.1, No. 7)



Besides two USB 3.0 ports on the I/O panel, there is one header on this motherboard. Each USB 3.0 header can support two ports.

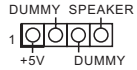
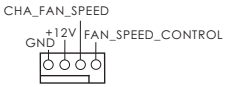
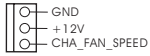
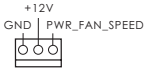
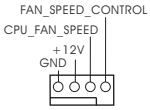
Front Panel Audio Header
(9-pin HD_AUDIO1)
(see p.1, No. 22)



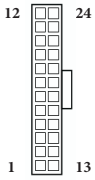
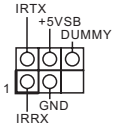
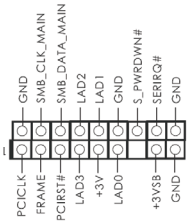
This header is for connecting audio devices to the front audio panel.

English

1. *High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instructions in our manual and chassis manual to install your system.*
2. *If you use an AC'97 audio panel, please install it to the front panel audio header by the steps below:*
   A. Connect Mic_IN (MIC) to MIC2_L.
   B. Connect Audio_R (RIN) to OUT2_R and Audio_L (LIN) to OUT2_L.
   C. Connect Ground (GND) to Ground (GND).
   D. MIC_RET and OUT_RET are for the HD audio panel only. You don't need to connect them for the AC'97 audio panel.
   E. To activate the front mic, go to the "FrontMic" Tab in the Realtek Control panel and adjust "Recording Volume".

Chassis Speaker Header (4-pin SPEAKER1) (see p.1, No. 12)		Please connect the chassis speaker to this header.
Chassis and Power Fan Connectors (4-pin CHA_FAN1) (see p.1, No. 18)		Please connect fan cables to the fan connectors and match the black wire to the ground pin.
(3-pin CHA_FAN2) (see p.1, No. 24)		
(3-pin PWR_FAN1) (see p.1, No. 1)		
CPU Fan Connectors (4-pin CPU_FAN1) (see p.1, No. 3)		This motherboard provides a 4-Pin CPU fan (Quiet Fan) connector. If you plan to connect a 3-Pin CPU fan, please connect it to Pin 1-3.
(3-pin CPU_FAN2) (see p.1, No. 2)		

English

ATX Power Connector (24-pin ATXPWR1) (see p.1, No. 6)		This motherboard provides a 24-pin ATX power connector. To use a 20-pin ATX power supply, please plug it along Pin 1 and Pin 13.
ATX 12V Power Connector (8-pin ATX12V1) (see p.1, No. 4)		This motherboard provides an 8-pin ATX 12V power connector. To use a 4-pin ATX power supply, please plug it along Pin 1 and Pin 5.
Infrared Module Header (5-pin IR1) (see p.1, No. 20)		This header supports an optional wireless transmitting and receiving infrared module.
Chassis Intrusion Header (2-pin CI1) (see p.1, No. 19)		This motherboard supports CASE OPEN detection feature that detects if the chassis cove has been removed. This feature requires a chassis with chassis intrusion detection design.
TPM Header (17-pin TPMS1) (see p.1, No. 21)		This connector supports Trusted Platform Module (TPM) system, which can securely store keys, digital certificates, passwords, and data. A TPM system also helps enhance network security, protects digital identities, and ensures platform integrity.

English

Technische Daten

Plattform	• Micro-ATX-Formfaktor • Vollständig solides Kondensatordesign
Prozessor	• Unterstützt Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® der 4. Generation im LGA1150-Paket • Digipower-Design • 4-Leistungsphasendesign • Unterstützt Intel® Turbo Boost 2.0-Technologie
Chipsatz	• Intel® B85 • Unterstützt Intel® Small Business Advantage 2.0
Speicher	• Dualkanal-DDR3-Speichertechnologie • 2 x DDR3-DIMM-Steckplätze • Unterstützt DDR3 1600/1333/1066 non-ECC, ungepufferter Speicher • Systemspeicher, max. Kapazität: 16GB (siehe ACHTUNG) • Unterstützt Intel® Extreme Memory Profile (XMP)1.3/1.2
Erweiterungs-steckplatz	• 1 x PCI-Express 3,0-x16-Steckplatz (PCIE1: x16-Modus) • 1 x PCI-Express 2,0-x1-Steckplatz • 1 x PCI-Steckplätze
Grafikkarte	• Integrierte Intel® HD Graphics-Visualisierung und VGA-Ausgänge können nur mit Prozessoren unterstützt werden, die GPU-integriert sind. • Unterstützt integrierte Intel® HD Graphics-Visualisierung: Intel® Quick Sync Video mit AVC, MVC (S3D) und MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • Max. geteilter Speicher: 1792 MB • Unterstützt D-Sub mit maximaler Auflösung von 1920 x 1200 bei 60 Hz
Audio	• 5.1-Kanal-HD-Audio (Realtek ALC662-Audiocodec) • TI® NE5532 (unterstützt erstklassigen Headset-Verstärker mit bis zu 600 Ohm)

LAN	• PCIE x1 Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111G • Unterstützt Wake-On-LAN • Unterstützt LAN-Kabelerkennung • Unterstützt energieeffizientes Ethernet 802.3az • Unterstützt PXE
Rückblende, E/A	• 1 x PS/2-Mausanschluss • 1 x PS/2-Tastaturanschluss • 1 x Serieller port: COM1 • 1 x Parallel Port (ECP/EPP Support) • 1 x D-Sub-Port • 1 x DVI-D-Port • 4 x USB 2.0-Ports • 2 x USB 3.0-Ports • 1 x RJ-45-LAN-Port mit LED (Aktivität/Verbindung-LED und Geschwindigkeit-LED) • HD-Audioanschluss: Line-in / Vorderer Lautsprecher / Mikrofon
Speicher	• 4 x SATA-III-6,0-Gb/s-Anschlüsse, unterstützt NCQ, AHCI und „Hot-Plugging“-Funktionen • 2 x SATA-II-3,0-Gb/s-Anschlüsse, unterstützt NCQ, AHCI und „Hot-Plugging“-Funktionen
Anschluss	• 1 x IR-Stiftleiste • 1 x Gehäuseeingriff-Stiftleiste • 1 x TPM-Stiftleiste • 2 x CPU-Lüfteranschlüsse (1 x 4-polig, 1 x 3-polig) • 2 x Gehäuselüfteranschlüsse (1 x 4-polig, 1 x 3-polig) • 1 x Netzteillüfteranschluss (3-polig) • 1 x 24-poliger ATX-Netzanschluss • 1 x 8-poliger 12-V-Netzanschluss • 1 x Audioanschluss an Frontblende • 2 x USB 2.0-Stiftleisten (unterstützt vier USB 2.0-Ports) • 1 x USB 3.0-Stiftleiste (unterstützt zwei USB 3.0-Ports)

BIOS-Funktion	• 64-Mb-AMI-UEFI-Legal-BIOS mit Unterstützung mehrsprachiger grafischer Benutzerschnittstellen • ACPI 1.1-konforme Aufweckereignisse • SMBIOS 2.3.1-Unterstützung • CPU, DRAM, PCH 1,05 V, PCH 1,5 V / Mehrfachspannungsanpassung
Support-CD	• Treiber, Dienstprogramme, Antivirensoftware (Testversion), CyberLink MediaEspresso 6.5-Testversion, Google Chrome Browser und Toolbar, Start8
Hardware-überwachung	• CPU-/Gehäuse/Netzteiltemperaturerkennung • CPU/Gehäuse/Netzteil-Lüftertachometer • Lautloser CPU-/Gehäuselüfter (ermöglicht automatische Anpassung der Geschwindigkeit des Gehäuselüfters über die CPU-Temperatur) • CPU/Gehäuselüfter-Mehrfachgeschwindigkeitssteuerung • Gehäuse-offen-Erkennung
	• Spannungsüberwachung: +12 V, +5 V, +3,3 V, CPU Vcore
Betriebssystem	• Konform mit Microsoft® Windows® 8 / 8, 64 Bit / 7 / 7, 64 Bit
Zertifizierungen	• FCC, CE, WHQL • ErP/EuP ready (ErP/EuP ready-Netzteil erforderlich)

Spécifications

Plateforme	• Facteur de forme Micro ATX • Conception à condensateurs solides
Processeur	• Prend en charge les processeurs 4ème Génération Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® en package LGA1150 • Conception Digi Power • Alimentation à 4 phases • Prend en charge la technologie Intel® Turbo Boost 2.0
Chipset	• Intel® B85 • Prend en charge Intel® Small Business Advantage 2.0
Mémoire	• Technologie mémoire double canal DDR3 • 2 x fentes DIMM DDR3 • Prend en charge les mémoires sans tampon non ECC DDR3 1600/1333/1066 • Capacité max. de la mémoire système : 16Go (voir AVERTISSEMENT) • Prend en charge Intel® Extreme Memory Profile (XMP)1.3/1.2
Fente d'expansion	• 1 x fente PCI Express 3.0 x 16 (PCIE1: mode x16) • 1 x fente PCI Express 2.0 x 1 • x fente PCI
Graphiques	• La technologie Intel® HD Graphics Built-in Visuals et les sorties VGA sont uniquement prises en charge par les processeurs intégrant un contrôleur graphique. • Prend en charge la technologie Intel® HD Graphics Built-in Visuals : Intel® Quick Sync Video with AVC, MVC (S3D) and MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • Mémoire partagée max. 1792Mo • Prend en charge le mode D-Sub avec une résolution maximale de 1920x1200 @ 60Hz

Audio	• Audio 5.1 CH HD (codec audio Realtek ALC662) • TI® NE5532 (compatible Premium Headset Amplifier jusqu'à 600 Ohms)
Réseau	• PCIE x1 Gigabit LAN 10/100/1000 Mo/s • Realtek RTL8111G • Prend en charge la fonction Wake-On-LAN • Prise en charge de la détection de câble LAN • Prend en charge la fonction d'économie d'énergie Ethernet 802.3az • Prend en charge PXE
Connectique du panneau arrière	• 1 x port souris PS/2 • 1 x port clavier PS/2 • 1 x port série: COM1 • 1 x port parallèle: Support ECP/EPP • 1 x port D-Sub • 4 x ports USB 2.0 • 2 x ports USB 3.0 • 1 x port RJ-45 LAN avec LED (LED ACT/LIEN et LED VITESSE) • Connecteurs jack audio HD : entrée ligne / haut-parleur avant / microphone
Stockage	• 4 x connecteurs SATA3 6,0 Go/s, compatibles avec les fonctions NCQ, AHCI et « Hot Plug » • 2 x connecteurs SATA2 3,0 Go/s, compatibles avec les fonctions NCQ, AHCI et « Hot Plug »
Connectique	• 1 x embase IR • 1 x embase d'intrusion châssis • 1 x embase TPM • 2 x connecteurs pour ventilateur de processeur (1 x 4 broches, 1 x 3 broches) • 2 x connecteurs pour ventilateur de châssis (1 x 4 broches, 1 x 3 broches) • 1 x connecteur pour ventilateur d'alimentation (3 broches) • 1 x connecteur d'alimentation ATX 24 broches • 1 x connecteur d'alimentation 12V 8 broches • 1 x connecteur audio panneau frontal • 2 x embases USB 2.0 (pour 4 ports USB 2.0)

	• 1 x embase USB 3.0 (pour 2 ports USB 3.0)
BIOS	• BIOS UEFI AMI 64Mo avec prise en charge d'interface graphique multilingue • Compatible ACPI 1.1 Wake Up Events • Prend en charge SMBIOS 2.3.1 • Réglage de la tension CPU, DRAM, PCH 1,05V, PCH 1,5V
CD inclus	• Pilotes, utilitaires, logiciel AntiVirus (version d'évaluation), version d'essai CyberLink MediaEspresso 6.5, navigateur Google Chrome et barre d'outils, Start8
Surveillance du matériel	• Détection de la température du processeur/châssis/ventilateur • Tachéomètre processeur/châssis/ventilateur d'alimentation • Fonction ventilateur silencieux processeur/châssis Quiet Fan (permet au ventilateur du châssis d'adapter sa vitesse de rotation automatiquement en fonction de la température du processeur) • Contrôle simultané des vitesse du ventilateur processeur/châssis • Détection CHASSIS OUVERT • Surveillance de la tension d'alimentation : +12V, +5V, +3,3V, CPU Vcore
Système d'exploitation	• Compatible Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bits
Certifications	• FCC, CE, WHQL • ErP/EuP Ready (alimentation ErP/EuP ready requise)

Specifiche

Piattaforma	• Fattore di forma Micro ATX • Design di condensatore solido
CPU	• Supporta Intel® Core™ i7 / i5 / i3 di 4a generazione / Xeon® / Pentium® / Celeron® in LGA1150 Package • Design Digi Power • 4 Power Phase Design • Supporta la tecnologia Intel® Turbo Boost 2.0
Chipset	• Intel® B85 • Supporta Intel® Small Business Advantage 2.0
Memoria	• Tecnologia con memoria DDR3 a doppio canale • 2 x slot DIMM DDR3 • Supporta la memoria DDR3 1600/1333/1066 non ECC, senza buffer • Capacità max. della memoria di sistema: 16GB (si veda la sezione ATTENZIONE) • Supporta Intel® Extreme Memory Profile (XMP)1.3/1.2
Slot di espansione	• 1 x PCI Express 3.0 x16 slot (PCIE1: modalità x16) • 1 x PCI Express 2.0 x1 slot • 1 x slot PCI
Grafica	• La videografica integrata della scheda video HD Intel® e le uscite VGA possono essere supportate soltanto con processori con GPU integrata. • Supporta la videografica integrata della scheda video HD Intel®: Intel® Quick Sync Video con AVC, MVC (S3D) e MPEG-2 Full HW Encode1, Intel® InTru™ 3D, tecnologia Intel® Clear Video HD, Intel® Insider™, Intel® HD Graphics 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • Memoria condivisa max. 1792 MB • Supporta D-Sub con una risoluzione max. fino a 1920 x 1200 a 60 Hz
Audio	• Audio HD a 5.1 canali (codec audio Realtek ALC662) • TI® NE5532 (supporta l'amplificatore per cuffie di qualità superiore fino a 600 Ohm)

LAN	• PCIE x 1 LAN Gigabit 10/100/1000 Mb/s • Realtek RTL8111G • Supporta Wake-On-LAN • Supporta il rilevamento cavo LAN • Supporta Energy Efficient Ethernet 802.3az • Supporta PXE
I/O pannello posteriore	• 1 x porta mouse PS/2 • 1 x porta tastiera PS/2 • 1 x porta COM • 1 x porta parallela: supporto ECP/EPP • 1 x porta D-Sub • 4 x porte USB 2.0 • 2 x porte USB 3.0 • 1 x porta LAN RJ-45 con LED (ACT/LINK LED e SPEED LED) • Jack audio HD: ingresso linea/altoparlante anteriore/ microfono
Archiviazione	• 4 x connettori SATA3 6,0 Gb/s, supporta le funzioni NCQ, AHCI e "Hot Plug" • 2 x connettori SATA2 3,0 Gb/s, supporta le funzioni NCQ, AHCI e "Hot Plug"
Connettore	• 1 x header IR • 1 x header di intrusione nello chassis • 1 x header TPM • 2 x connettori ventola CPU (1 x 4 pin, 1 x 3 pin) • 2 x connettori ventola chassis (1 x 4 pin, 1 x 3 pin) • 1 x connettore ventola alimentazione (3 pin) • 1 x connettore alimentazione ATX a 24 pin • 1 x connettore alimentazione da 12 V a 8 pin • 1 x connettore audio pannello anteriore • 2 x header USB 2.0 (supporto 4 porte USB 2.0) • 1 x header USB 3.0 (supporta 2 porte USB 3.0)
Caratteristiche del BIOS	• BIOS legale 64 Mb AMI UEFI con supporto GUI multilingue • Eventi di wake up conformi ad ACPI 1.1 • Supporto SMBIOS 2.3.1 • Multiregolazione tensione CPU, DRAM, PCH 1,05 V, PCH 1,5 V

CD di supporto	• Driver, utilità, software antivirus (versione di prova), versione di prova di CyberLink MediaEspresso 6.5, browser e barra degli strumenti Google Chrome, Start8
Hardware Monitor	• Sensore temperatura CPU/chassis/ventola • Tachimetro CPU/chassis/ventola alimentazione • Ventola silenziosa CPU/chassis (consente l'autoregolazione della velocità della ventola dello chassis mediante la temperatura della CPU) • Controllo multivelocità della ventola di CPU/chassis • Rilevamento CASE OPEN • Monitoraggio tensione: +12 V, +5 V, +3,3 V, CPU Vcore
SO	• Microsoft® Windows® 8/8 a 64-bit/7/conforme a 7 a 64-bit
Certificazioni	• FCC, CE, WHQL • ErP/EuP Ready (è necessaria alimentazione ErP/EuP ready)

Especificaciones

Plataforma	• Factor de forma Micro ATX • Diseño de los Condensadores: All Solid
CPU	• Compatible con 4.ª Generación de Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® en paquete LGA1150 • Diseño Digi Power • Diseño de 4 fases de alimentación • Compatible con la tecnología de Intel® Turbo Boost 2.0
Conjunto de chips	• Intel® B85 • Compatible con Intel® Small Business Advantage 2.0
Memoria	• Tecnología de memoria de Doble Canal DDR3 • 2 ranuras DDR3 DIMM • Compatible con memoria no-ECC, sin búfer DDR3 1600/1333/1066 • Capacidad máxima de la memoria del sistema: 16GB (consulte la ADVERTENCIA) • Compatible con Extreme Memory Profile (XMP)1.3/1.2 de Intel®
Ranura de expansión	• 1 ranura PCI Express 3.0 x16 (PCIE1: modo x16) • 1 ranura PCI Express 2.0 x1 • 1 ranura PCI
Gráficos	• La Tecnología visual integrada de gráficos HD de Intel® y las salidas de VGA son compatibles únicamente con procesadores con GPU integrado. • Compatible con la Tecnología visual integrada de gráficos HD de Intel®: Intel® Quick Sync Video con AVC, MVC (S3D) y MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • Memoria compartida máxima: 1792MB • Compatible con D-Sub con máxima resolución hasta 1920x1200 @ 60Hz
Audio	• 5.1 Audio CH HD (Realtek ALC662 Audio Codec) • TI® NE5532 (compatible con Amplificador de Auriculares Premium de hasta 600 ohmios)

LAN	• 1 LAN Gigabit PCIE 10/100/1000 Mb/s • Realtek RTL8111G • Compatible con Wake-On-LAN • Admite detección de conexión de cable LAN • Compatible con Ethernet de consumo eficiente de energía 802.3az • Compatible con PXE
Panel trasero I/O	• 1 puerto de ratón PS/2 • 1 puerto de teclado PS/2 • 1 puerto serial: COM1 • 1 puerto paralelo: soporta ECP/EPP • 1 puerto D-Sub • 4 puertos USB 2.0 • 2 puertos USB 3.0 • 1 puerto LAN RJ-45 con LED (ACT/LINK LED y SPEED LED) • Conector de audio HD: Entrada de línea / Altavoz frontal / Micrófono
Almace-namiento	• 4 conectores SATA3 de 6,0 Gb/s, compatibles con las funciones NCQ, AHCI y “Hot Plug” • 2 conectores SATA2 de 3,0 Gb/s, compatibles con las funciones NCQ, AHCI y “Hot Plug”
Conectores	• 1 cabezal IR • 1 cabezal de intrusión de chasis • 1 cabezal TPM • 2 conectores de ventilador de la CPU (1 de 4 pines y 1 de 3 pines) • 2 conectores de ventilador del chasis (1 de 4 pines y 1 de 3 pines) • 1 conector de ventilador de alimentación (de 3 pines) • 1 conector de alimentación ATX de 24 pines • 1 conector de alimentación de 12V de 8 pines • 1 conector de audio del panel frontal • 2 cabezales USB 2.0 (compatibles con 4 puertos USB 2.0) • 1 cabezal USB 3.0 (compatible con 2 puertos USB 3.0)

Características del BIOS	• BIOS legal UEFI AMI de 64Mb compatible con interfaz gráfica de usuario multilingüe • Eventos de reactivación conformes con ACPI 1.1 • Compatible con SMBIOS 2.3.1 • Multiajuste de voltaje de CPU, DRAM, PCH 1,05V, PCH 1,5V
CD de soporte	• Controladores, Utilidades, Software AntiVirus (Versión de prueba), Versión de prueba de CyberLink MediaEspresso 6.5, Explorador y Barra de herramientas de Google Chrome y Start8
Monitor del hardware	• Método de sensor de temperatura de la alimentación/CPU/Chasis • Tacómetro del ventilador de alimentación/CPU/Chasis • Ventilador silencioso de la CPU/Chasis (permite ajustar automáticamente la velocidad del ventilador del chasis mediante la temperatura de la CPU) • Control multivelocidad del ventilador de la CPU/Chasis • Detección de CUBIERTA ABIERTA • Control del voltaje: +12V, +5V, +3,3V, CPU Vcore
SO	• Compatible con Microsoft® Windows® 8 / 8 de 64 bits / 7 / 7 de 64 bits
Certificaciones	• FCC, CE, WHQL • Compatible con ErP/EuP (requiere toma de alimentación compatible con ErP/EuP)

Спецификация

Платформа	• Форм-фактор Micro ATX • Использование только твердотельных конденсаторов
ЦП	• Поддержка процессоров 4-го поколения Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® в исполнении LGA1150 • Digi Power Design • Система питания 4 • Поддержка технологии Intel® Turbo Boost 2.0
Чипсет	• Intel® B85 • Поддержка Intel® Small Business Advantage 2.0
Память	• Двухканальная память DDR3 • 2 x гнездо DDR3 DIMM • Поддержка модулей памяти DDR3 1600/1333/1066 Non-ECC Unbuffered • Максимальный объем системной памяти: 16 Гб (см. «ПРЕДОСТЕРЕЖЕНИЕ») • Поддержка Intel® Extreme Memory Profile (XMP)1.3/1.2
Гнезда расширения	• 1 x PCI Express 3.0 x16 гнезд (PCIE1: режим x16) • 1 x PCI Express 2.0 x1 гнезд • 1 x гнезд PCI
Графическая система	• Поддержка выходных сигналов Intel® HD Graphics Built-in Visuals и VGA возможна только при использовании процессоров со встроенными графическими процессорами. • Поддержка Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video с AVC, MVC (S3D) и MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Clear Video HD Technology, Intel® Insider™, Intel® HD Graphics 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • Максимальный объем совместно используемой памяти: 1792 Мб • Поддержка D-Sub с максимальным разрешением до 1920x1200 при 60 Гц

Аудио	• 5.1-канальный звук высокой четкости HD Audio (аудиокодек Realtek ALC662) • TI® NE5532 (поддержка усилителя Premium Headset Amplifier до 600 Ом)
ЛВС	• PCIE x1 Gigabit LAN 10/100/1000 Мб/с • Realtek RTL8111G • Поддержка Wake-On-LAN • Поддержка определения кабеля ЛВС • Поддержка Energy Efficient Ethernet 802.3az • Поддержка PXE
Порты ввода-вывода на задней панели	• 1 x PS/2 мышь • 1 x PS/2 для клавиатуры • 1 x порт COM1 • 1 x параллельный порт: поддержка ECP/EPP • 1 x D-Sub • 4 x USB 2.0 • 2 x USB 3.0 • 1 x RJ-45 для ЛВС с СИД (СИД ACT/LINK и МИД SPEED) • Разъемы HD Audio: линейный вход / передние динамики / микрофон
Запоминающие устройства	• 4 x разъем SATA3 6,0 Гб/с, поддержка функций NCQ, AHCI и «горячей» замены • 2 x разъем SATA2 3,0 Гб/с, поддержка функций NCQ, AHCI и «горячей» замены
Разъемы	• 1 x колодка IR • 1 x колодка для датчика вскрытия корпуса • 1 x колодка TPM • 2 x разъем для вентилятора ЦП (1 x 4-контактный, 1 x 3-контактный) • 2 x разъема для вентилятора корпуса (1 x 4-контактный, 1 x 3-контактный) • 1 x разъем для вентилятора блока питания (3-контактный) • 1 x разъем питания ATX (24-контактный) • 1 x 8-контактный разъем питания 12 В • 1 x аудиоразъем на передней панели • 2 x колодки USB 2.0 (поддержка 4 портов USB 2.0) • 1 x колодка USB 3.0 (поддержка 2 портов USB 3.0)

Особенности BIOS	• 64 Мб AMI UEFI Legal BIOS с поддержкой многоязычного ГИП • Совместимость с управлением энергопотреблением по ACPI 1.1 • Поддержка SMBIOS 2.3.1 • Регулировка напряжений ЦП, DRAM, PCH 1,05 В, PCH 1,5 В
Диск с ПО	• Драйвера, утилиты, антивирусное ПО (демоверсия), CyberLink MediaEspresso 6.5 (демоверсия), браузер и панель инструментов Google Chrome, Start8
Контроль оборудования	• Датчик температуры ЦП/корпуса/блока питания • Тахометр вентиляторов ЦП/корпуса/блока питания • Малошумящий вентилятор ЦП/корпуса (с автоматической регулировкой оборотов по температуре ЦП) • Управление оборотами вентилятора ЦП/корпуса • Технология определения вскрытия корпуса • Контроль напряжения: +12 В, +5 В, +3,3 В, ЦП Vcore
ОС	• Microsoft® Windows® 8 / 8 64-разрядная / 7 / 7 64-разрядная
Сертификация	• FCC, CE, WHQL • Совместимость с ErP/EuP (необходим блок питания, соответствующий стандарту ErP/EuP)

Especificações

Plataforma	• Formato Micro ATX • Design de condensador sólido
CPU	• Suporta processadores Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® de 4ª geração em socket LGA1150 • Design Digi Power • Design com 4 fases de alimentação • Suporta a tecnologia Intel® Turbo Boost 2.0
Chipset	• Intel® B85 • Suporta a tecnologia Intel® Small Business Advantage 2.0
Memória	• Tecnologia de memória DDR3 de dois canais • 2 x ranhuras DIMM DDR3 • Suporta memória DDR3 1600/1333/1066, não ECC, sem memória intermédia • Capacidade máxima da memória do sistema: 16GB (consultar AVISO) • Suporta Extreme Memory Profile (XMP)1.3/1.2 da Intel®
Ranhuras de expansão	• 1 x ranhura PCI Express 3.0 x16 (PCIE1: modo x16) • 1 x ranhura PCI Express 2.0 x1 • 1 x ranhura PCI
Gráficos	• Os gráficos incorporados Intel® HD e as saídas VGA apenas podem ser suportados com processadores com GPU integrada. • Suporta gráficos incorporados Intel® HD: Intel® Quick Sync Video com AVC, MVC (S3D) e MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Tecnologia Intel® Clear Video HD, Intel® Insider™, Gráficos Intel® HD 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • Memória partilhada máxima de 1792MB • Suporta D-Sub com resolução máxima de até 1920x1200 @ 60Hz
Áudio	• Áudio HD de 5.1 canais (Codec de áudio Realtek ALC662) • TI® NE5532 (suporta amplificador de auscultadores premium até 600 Ohms)

LAN	• LAN Gigabit 10/100/1000 Mb/s PCIE x1 • Realtek RTL8111G • Suporta Wake-On-LAN • Suporta Detecção de cabo LAN • Suporta IEEE 802.3az • Suporta PXE
E/S do painel traseiro	• 1 x Porta PS/2 para mouse • 1 x Porta PS/2 para teclado • 1 x Porta COM1 • 1 x Porta paralela (com suporte ECP/EPP) • 1 x Porta D-Sub • 4 x portas USB 2.0 • 2 x portas USB 3.0 • 1 x Porta LAN RJ-45 com LED (LED ACT/LIGAÇÃO e LED DE VELOCIDADE) • Entrada de linha / Altifalante frontal / Microfone
Armazenamento	• 4 x conectores SATA3 a 6,0 Gb/s, com suporte para NCQ, AHCI e funções "Hot Plug" • 2 x conectores SATA2 a 3,0 Gb/s, com suporte para NCQ, AHCI e funções "Hot Plug"
Conector	• 1 x Terminal IR • 1 x Terminal de intrusão no chassis • 1 x Terminal TPM • 2 x Conectores da ventoinha da CPU (1 x 4 pinos, 1 x 3 pinos) • 2 x Conectores da ventoinha do chassis (1 x 4 pinos, 1 x 3 pinos) • 1 x Conector da ventoinha de alimentação (3 pinos) • 1 x conector de alimentação de 24 pinos ATX • 1 x conector de alimentação de 12V de 8 pinos • 1 x conector de áudio do painel frontal • 2 x terminais USB 2.0 (suporte para 4 portas USB 2.0) • 1 x terminal USB 3.0 (suporte para 2 portas USB 3.0)

Funcionalidades da BIOS	• BIOS UEFI oficial da AMI com 64Mb com suporte de interface multilíngue • Eventos de reactivação compatíveis com ACPI 1.1 • Suporta SMBIOS 2.3.1 • Multi-ajuste de tensão de CPU, DRAM, PCH 1,05V, PCH 1,5V
CD de suporte	• Controladores, Utilitários, Software antivírus (versão de avaliação), CyberLink MediaEspresso 6.5 - Versão de avaliação, Navegador e Barra de Ferramentas Google Chrome, Start8
Monitor de Hardware	• Sensor de temperatura de CPU/Chassis/Alimentação • Taquímetro de ventoinha de CPU/Chassis/Alimentação • Ventoinha de CPU/Chassis silenciosa (Permite o ajuste automático da velocidade da ventoinha do chassis através da temperatura da CPU) • Controlo de velocidade da ventoinha de CPU/Chassis • Detecção de ABERTURA da CAIXA • Monitorização da tensão: +12V, +5V, +3,3V, CPU Vcore
Sistema Operativo	• Compatível com Microsoft® Windows® 8 / 8 64-bits / 7 / 7 64-bits
Certificações	• FCC, CE, WHQL • Preparada para ErP/EuP (é necessária uma fonte de alimentação preparada para ErP/EuP)

Özellikler

Platform	• Micro ATX Form Faktörü • Tam Katı Bağlayıcı tasarımı
CPU	• 4ncü Nesil Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron®, LGA1150 Paketinde desteklemektedir • Dijital Güç Tasarımı • 4 Güç Safhası Tasarımı • Intel® Turbo Boost 2.0 Teknolojisini destekler
Yonga kümesi	• Intel® B85 • Intel® Küçük İşletme Avantaj 2.0 özelliğini destekler
Bellek	• Çift Kanallı DDR3 Bellek Teknolojisi • 2 x DDR3 DIMM yuvaları • DDR3 1600/1333/1066 ECC olmayan, ara belleğe alınmamış belleği destekler • Maksimum sistem belleği kapasitesi: 16GB (bkz. DİKKAT ikazı) • Intel® Üstün Bellek Profili (XMP)1.3/1.2 özelliğini destekler
Genişletme Yuvası	• 1 x PCI Express 3.0 x16 yuva (PCIE1: x16 modu) • 1 x PCI Express 2.0 x1 yuva • 1 x PCI yuva
Grafikler	• Intel® HD Graphics Dahili Görselleri ile VGA çıktıları, yalnızca GPU entegre edilmiş işlemciler ile desteklenir. • Intel® HD Graphics Dahili Görsellerini destekler : AVC, MVC (S3D) ve MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Intel® Net Video HD Teknolojisi, Intel® Insider™, Intel® HD Graphics 4400/4600 ile Intel® Quick Sync Video • Pixel Shader 5.0, DirectX 11.1 • Maksimum paylaşılan bellek 1792MB • 1920x1200 @ 60Hz'ye kadar çözünürlükle D-Sub işlevini destekler
Ses	• 5.1 CH HD Ses (Realtek ALC662 Ses Codec Bileşeni) • TI® NE5532 (600 Ohm'a kadar Premium Kulaklık Yükselticisi desteği)

LAN	• PCIE x1 Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111G • LAN Açılışını Destekler • LAN Kablo Algılama'yı destekler • Enerji Verimliliğine Sahip Ethernet 802.3az işlevini destekler • PXE özelliğini destekler
Arka Panel I/O	• 1 x PS/2 Fare Bağlantı Noktası • 1 x PS/2 Klavye Bağlantı Noktası • 1 x Seri Port: COM1 • 1 x Paralel Portu (ECP/EPP destekler) • 1 x D-Sub Bağlantı Noktası • 4 x USB 2.0 Bağlantı noktası • 2 x USB 3.0 Bağlantı noktası • LED'e sahip 1 x RJ-45 LAN Bağlantı Noktası (ACT/LINK LED ve SPEED LED) • HD Ses Jakı: Hat Girişi / Ön Hoparlör / Mikrofon
Depolama	• 4 x SATA3 6,0 Gb/s bağlayıcıları NCQ, AHCI ve "Hot Plug" işlevlerini destekler • 2 x SATA2 3,0 Gb/s bağlayıcıları NCQ, AHCI ve "Hot Plug" işlevlerini destekler
Bağlayıcı	• 1 x IR bağlantısı • 1 x Kasa Yetkisiz Erişim bağlantısı • 1 x TPM bağlantısı • 2 x CPU Fan bağlayıcıları (1 x 4-pin, 1 x 3-pin) • 2 x Kasa Fanı bağlayıcıları (1 x 4-pin, 1 x 3-pin) • 1 x Güç Fanı bağlayıcısı (3-pin) • 1 x 24 pin ATX güç bağlayıcısı • 1 x 8 pin 12V güç bağlayıcısı • 1 x Ön panel ses bağlayıcısı • 2 x USB 2.0 bağlantısı (4 USB 2.0 bağlantı noktasını destekler) • 1 x USB 3.0 bağlantısı (2 USB 3.0 bağlantı noktasını destekler)
BIOS Özelliği	• Çok dilli GUI Desteği ile 64Mb AMI UEFI Legal BIOS • ACPI 1.1 Uyumluluğu Uyandırma Olayları • SMBIOS 2.3.1 Desteği • CPU, DRAM, PCH 1,05V, PCH 1,5V Voltaj Çoklu Ayarı

Destek CD'si	• Sürücüler, Yardımcı Yazılımlar, AntiVirüs Yazılımı (Deneme Sürümü), CyberLink MediaEspresso 6.5 Deneme Sürümü, Google Chrome Tarayıcı ve Araç Çubuğu, Start8
Donanım Monitörü	• CPU/Kasa/Güç Sıcaklığı Tespiti • CPU/Kasa/Güç Fanı Devirölçer • CPU/Kasa Sessiz Fan (Kasa Fan Hızının CPU Sıcaklığına Göre Otomatik olarak Ayarlanmasını Sağlar) • CPU/Kasa Fanı Çoklu Hız Kontrolü • KASA AÇIK algılaması • Voltaj Denetleme: +12V, +5V, +3,3V, CPU Vcore
OS	• Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit ile uyumlu
Belgeler	• FCC, CE, WHQL • ErP/EuP için hazır (ErP/EuP için hazır güç beslemesi gereklidir)

1 개요

ASRock B85M-GL 마더보드를 구입해 주셔서 감사합니다 . 이 마더보드는 ASRock 의 일관되고 엄격한 품질관리 하에 생산되어 신뢰성이 우수합니다 . 품질과 내구성에 대한 ASRock 의 기준에 부합하는 우수한 성능과 견고한 설계를 제공합니다 .

마더보드 규격과 BIOS 소프트웨어를 업데이트할 수도 있기 때문에 , 이 문서의 내용은 예고 없이 변경될 수 있습니다 . 이 설명서가 변경될 경우 , 업데이트된 버전은 ASRock 의 웹사이트에서 추가 통지 없이 제공됩니다 . 이 마더보드와 관련하여 기술적 지원이 필요한 경우 , 당사의 웹사이트를 방문하여 사용 중인 모델에 대한 구체적 정보를 구하십시오 . ASRock 의 웹사이트에서는 최신 VGA 카드와 CPU 지원 목록도 찾을 수 있습니다 . ASRock 웹사이트 http://www.asrock.com.

1.1 포장 내용물

- ASRock B85M-GL 마더보드 (Micro ATX 폼 팩터)
- ASRock B85M-GL 간편 설치 안내서
- ASRock B85M-GL 지원 CD
- 시리얼 ATA (SATA) 데이터 케이블 2 개 (선택 품목)
- I/O 패널 실드 1 개

1.2 규격

플랫폼	• Micro ATX 폼 팩터 • 모든 솔리드 콘덴서 구조
CPU	• LGA1150 패키지로 제공되는 4 세대 Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® 지원 • Digi 전원 구조 • 4 개 전원 위상 구조 • Intel® Turbo Boost 2.0 기술 지원
칩세트	• Intel® B85 • Intel® Small Business Advantage 2.0 지원
메모리	• 듀얼 채널 DDR3 메모리 기술 • DDR3 DIMM 슬롯 2 개 • DDR3 1600/1333/1066 비 -ECC, 비버퍼링 메모리 지원 • 시스템 메모리 최대 용량 : 16GB (주의 참조) • Intel® Extreme Memory Profile (XMP)1.3/1.2 지원
확장 슬롯	• PCI Express 3.0 x16 슬롯 1 개 (PCIE1: x16 모드) • PCI Express 2.0 x1 슬롯 1 개 • PCI 슬롯 1 개
그래픽	• Intel® HD 그래픽스 빌트 - 인 비주얼과 VGA 출력은 GPU 통합 프로세서로만 지원할 수 있습니다 . • Intel® HD 그래픽스 빌트 - 인 비주얼 지원 : AVC, MVC (S3D) 및 MPEG-2 풀 HW Encode1 지원 Intel® Quick Sync Video, Intel® InTru™ 3D, Intel® 클리어 비디오 HD 기술 , Intel® Insider™, Intel® HD 그래픽스 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • 최대 공유 메모리 1792MB • D-Sub 지원 (최대 해상도 1920x1200 @ 60Hz)

오디오	• 5.1 CH HD 오디오 지원 (Realtek ALC662 오디오 코덱) • TI® NE5532 (최대 600 옴의 프리미엄 헤드셋 증폭기 지원)
LAN	• PCIE 1 개 , Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111G • Wake-On-LAN 지원 • LAN 케이블 감지 지원 • 절전형 이더넷 802.3az 지원 • PXE 지원
후면 패널 I/O	• PS/2 마우스 포트 1 개 • PS/2 키보드 포트 1 개 • 의 COM1 1 개 • 의 병렬 포트 :ECP/EPP 지원오 디오 잭 1 개 • D-Sub 포트 1 개 • USB 2 포트 4 개 • USB 3 포트 2 개 • LED 장착 RJ-45 LAN 포트 1 개 (ACT/LINK LED 및 SPEED LED) • HD 오디오 잭 : 라인 입력 / 전면 스피커 / 마이크
저장 장치	• SATA3 6.0 Gb/s 커넥터 4 개 , NCQ, AHCI 및 핫 플러그 기능 지원 • SATA2 3.0 Gb/s 커넥터 2 개 , NCQ, AHCI 및 핫 플러그 기능 지원
커넥터	• IR 헤더 1 개 • 섀시 침입 헤더 1 개 • TPM 헤더 1 개 • CPU 팬 커넥터 2 개 (1 x 4 핀 , 1 x 3 핀) • 섀시 팬 커넥터 2 개 (1 x 4 핀 , 1 x 3 핀) • 전원 팬 커넥터 1 개 (3 핀) • 24 핀 ATX 전원 커넥터 1 개 • 8 핀 12V 전원 커넥터 1 개 • 전면 패널 오디오 커넥터 1 개 • USB 2.0 헤더 2 개 (USB 2.0 포트 4 개 지원) • USB 3.0 헤더 1 개 (USB 3.0 포트 2 개 지원)

BIOS 기능	• 다국어 GUI 지원을 제공하는 64Mb AMI UEFI 적합형 BIOS • ACPI 1.1 준수 웨이크 업 이벤트 • SMBIOS 2.3.1 지원 • CPU, DRAM, PCH 1.05V, PCH 1.5V 전압 다중 조정
지원 CD	• 드라이버 , 유틸리티 , 백신 소프트웨어 (시험판), CyberLink MediaEspresso 6.5 시험판 , Google Chrome 브라우저 및 툴바 , Start8
하드웨어 모니터	• CPU/ 섀시 / 전원 온도 감지 • CPU/ 섀시 / 전원 팬 타코미터 • CPU/ 섀시 저소음 팬 (CPU 온도에 의한 섀시 팬 속도 자동 조정) • CPU/ 섀시 팬 다중 속도 조절 • 케이스 열림 감지 • 전압 모니터링 : +12V, +5V, +3.3V, CPU Vcore
OS	• Microsoft® Windows® 8 / 8 64 비트 / 7 / 7 64 비트 호환
인증	• FCC, CE, WHQL • ErP/EuP 사용 가능 (ErP/EuP 사용 가능 전원공급장치 필요)

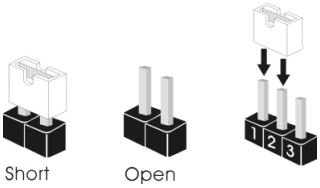
** 자세한 제품 정보에 대해서는 당사 웹사이트를 참조하십시오 : http://www.asrock.com*

BIOS 설정을 조정하거나 Untied Overclocking Technology 를 적용하거나 타업체의 오버클로킹 도구를 사용하는 것을 포함하는 오버클로킹에는 어느 정도의 위험이 따른다는 것을 유념하십시오 . 오버클로킹은 시스템 안정성에 영향을 주거나 심지어 시스템의 구성 요소와 장치에 손상을 입힐 수도 있습니다 . 오버클로킹은 사용자 스스로 위험과 비용을 감수하고 해야 합니다 . 당사는 오버클로킹에 의해 발생할 수 있는 손상에 대해서 책임이 없습니다 .

제한 때문에 실제 메모리 크기는 Windows® 32 비트 운영체제 하의 시스템 사용을 위한 예비 메모리용 4GB 보다 더 적을 수 있습니다 . Windows® 64 비트 운영체제에는 그러한 제한이 없습니다 . ASRock XFast RAM 을 사용하여 Windows® 가 사용할 수 없는 메모리를 이용할 수 있습니다 .

1.3 점퍼 설정

그림은 점퍼를 어떻게 설정하는지 보여줍니다. 점퍼 캡을 핀에 씌우면 점퍼가 단락 됩니다. 점퍼 캡을 핀에 씌우지 않으면 점퍼가 단선 됩니다. 그림은 3 핀 점퍼를 보여주며 핀 1 과 핀 2 는 점퍼 캡을 씌울 때 단락 됩니다.



Clear CMOS 점퍼
(CLRCMOS1)
(1 페이지, 23 번 항목 참조)

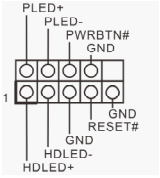
CLRCMOS1 을 사용하여 CMOS 에 저장된 데이터를 지울 수 있습니다. 시스템 파라미터를 지우고 기본 설정으로 초기화하려면 컴퓨터를 끄고 전원 코드를 전원공급장치에서 빼십시오. 15 초 동안 기다린 후 점퍼 캡을 사용하여 CLRCMOS1 의 핀 2 와 핀 3 을 5 초 동안 단락시키십시오. 그러나 BIOS 업데이트 직후에는 CMOS 를 삭제하지 마십시오. BIOS 업데이트를 완료한 직후 CMOS 를 지워야 할 경우, 우선 시스템을 부팅한 후 바이오스 업데이트를 종료한 다음 CMOS 지우기 작업을 해야 합니다. CMOS 배터리를 제거할 경우에만 암호, 날짜, 시간, 사용자 기본 프로파일이 지워집니다.

CMOS 를 지울 경우 케이스 열림이 감지될 수도 있습니다. BIOS 옵션 Clear Status(상태 지우기) 를 조절하여 이전의 섀시 침입 상태에 대한 기록을 지우십시오.

1.4 온보드 헤더 및 커넥터

온보드 헤더와 커넥터는 점퍼가 아닙니다. 점퍼 캡을 온보드 헤더와 커넥터에 씌우지 마십시오. 점퍼 캡을 온보드 헤더와 커넥터에 씌우면 마더보드가 영구적으로 손상됩니다.

시스템 패널 헤더
(9 핀 PANEL1)
(1 페이지 , 15 번 항목 참조)



섀시의 전원 스위치 , 리셋 스위치 , 시스템 상태 표시등을 아래의 핀 할당에 따라 이 헤더에 연결합니다. 케이블을 연결하기 전에 양극 핀과 음극 핀을 기록합니다.

PWRBTN(전원 스위치):
섀시 전면 패널의 전원 스위치에 연결합니다. 전원 스위치를 이용해 시스템을 끄는 방법을 구성할 수 있습니다.

RESET(리셋 스위치):
섀시 전면 패널의 전원 스위치에 연결합니다. 컴퓨터가 정지하고 정상적 재시작을 수행하지 못할 경우 리셋 스위치를 눌러 컴퓨터를 재시작합니다.

PLED(시스템 전원 LED):
섀시 전면 패널의 전원 상태 표시등에 연결합니다. 시스템이 작동하고 있을 때는 LED 가 켜져 있습니다. 시스템이 S1/S3 대기 상태에 있을 때는 LED 가 계속 깜박입니다. 시스템이 S4 대기 상태 또는 전원 꺼짐 (S5) 상태에 있을 때는 LED 가 꺼져 있습니다.

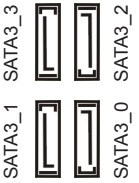
HDLED(하드 드라이브 동작 LED):
섀시 전면 패널의 하드 드라이브 동작 LED 에 연결합니다. 하드 드라이브가 데이터를 읽거나 쓰고 있을 때 LED 가 켜져 있습니다.

전면 패널 디자인은 섀시별로 다를 수 있습니다. 전면 패널 모듈은 주로 전원 스위치 , 리셋 스위치 , 전원 LED, 하드 드라이브 동작 LED, 스피커 등으로 구성되어 있습니다. 섀시 전면 패널 모듈을 이 헤더에 연결할 때 와이어 할당과 핀 할당이 정확히 일치하는지 확인합니다.

시리얼 ATA2 커넥터
(SATA2_4:
(1 페이지 , 9 번 항목 참조)
(SATA2_5:
(1 페이지 , 8 번 항목 참조)

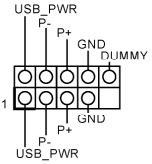
이들 두 개의 SATA2 커넥터는 최대 3.0 Gb/s 데이터 전송 속도를 제공하는 내부 저장 장치용 SATA 데이터 케이블을 지원합니다 .

시리얼 ATA3 커넥터
(SATA3_0:
1 페이지 , 11 번 항목 참조)
(SATA3_1:
(1 페이지 , 13 번 항목 참조)
(SATA3_2:
(1 페이지 , 10 번 항목 참조)
(SATA3_3:
1 페이지 , 14 번 항목 참조)



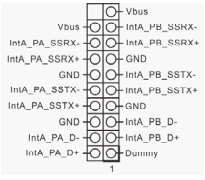
이들 네 개의 SATA3 커넥터는 최대 6.0 Gb/s 데이터 전송 속도를 제공하는 내부 저장 장치용 SATA 데이터 케이블을 지원합니다 .

USB 2.0 헤더
(9 핀 USB4_5)
(1 페이지 , 17 번 항목 참조)
(9 핀 USB6_7)
(1 페이지 , 16 번 항목 참조)



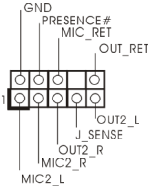
I/O 패널에 USB 2.0 포트 네 개가 탑재되어 있을 뿐 아니라 마더보드에 헤더 두 개가 탑재되어 있습니다 . 각 USB 2.0 헤더는 포트 두 개를 지원할 수 있습니다 .

USB 3.0 헤더
(19 핀 USB3_2_3)
(1 페이지 , 7 번 항목 참조)



I/O 패널에 USB 3.0 포트 두 개가 탑재되어 있을 뿐 아니라 마더보드에 헤더 한 개가 탑재되어 있습니다 . 각 USB 3.0 헤더는 포트 두 개를 지원할 수 있습니다 .

전면 패널 오디오 헤더
(9 핀 HD_AUDIO1)
(1 페이지 , 22 번 항목 참조)



이 헤더는 오디오 장치를 전면 오디오 패널에 연결하는 데 사용됩니다 .

1. 고음질 오디오는 잭 감지를 지원하지만 올바르게 작동하려면 섀시의 패널 와이어가 HDA 를 지원해야 합니다 . 설명서 및 섀시 설명서에 나와 있는 지침을 따라 시스템을 설치하십시오 .

2. AC 97 오디오 패널을 사용할 경우 아래와 같은 절차를 따라 전면 패널 오디오 헤더에 설치하십시오 :

A. Mic_IN (MIC) 을 MIC2_L 에 연결합니다 .

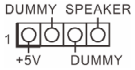
B. Audio_R (RIN) 을 OUT2_R 에 연결하고 Audio_L (LIN) 을 OUT2_L 에 연결합니다 .

C. 접지 (GND) 를 접지 (GND) 에 연결합니다 .

D. MIC_RET 및 OUT_RET 는 HD 오디오 패널에만 사용됩니다 . AC 97 오디오 패널용으로 연결할 필요가 없습니다 .

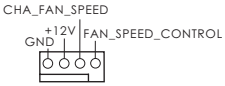
E. 전면 마이크를 활성화하려면 Realtek 제어판에서 FrontMic 탭으로 가서 Recording Volume(녹음 볼륨) 을 조정합니다 .

섀시 스피커 헤더
(4 핀 SPEAKER1)
(1 페이지 , 12 번 항목 참조)



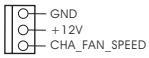
섀시 스피커를 이 헤더에 연결하십시오 .

섀시 및 전원 팬 커넥터
(4 핀 CHA_FAN1)
(1 페이지 , 18 번 항목 참조)

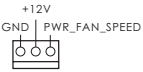


팬 케이블을 팬 커넥터에 연결하고 검은색 와이어를 접지핀에 연결하십시오 .

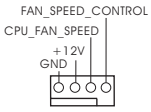
(3 핀 CHA_FAN2)
(1 페이지 , 24 번 항목 참조)



(3 핀 PWR_FAN1)
(1 페이지 , 1 번 항목 참조)

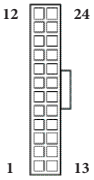
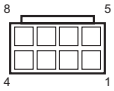
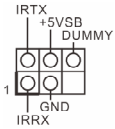


CPU 팬 커넥터
(4 핀 CPU_FAN1)
(1 페이지 , 3 번 항목 참조)

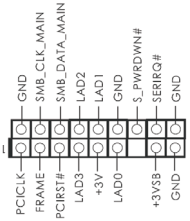


이 마더보드에는 4 핀 CPU 팬 (저소음 팬) 커넥터가 탑재되어 있습니다 . 3 핀 CPU 팬을 연결하려는 경우 핀 1-3 에 연결하십시오 .

(3 핀 CPU_FAN2)
(1 페이지 , 2 번 항목 참조)

ATX 전원 커넥터 (24 핀 ATXPWR1) (1 페이지 , 6 번 항목 참조)		이 마더보드에는 24 핀 ATX 전원 커넥터가 탑재되어 있습니다 . 20 핀 ATX 전원공급장치를 사용하려면 핀 1 과 핀 13 을 따라 연결하십시오 .
ATX 12V 전원 커넥터 (8 핀 ATX12V1) (1 페이지 , 4 번 항목 참조)		이 마더보드에는 8 핀 ATX 12V 전원 커넥터가 탑재되어 있습니다 . 4 핀 ATX 전원공급장치를 사용하려면 핀 1 과 핀 5 을 따라 연결하십시오 .
적외선 모듈 헤더 (5 핀 IR1) (1 페이지 , 20 번 항목 참조)		이 헤더는 선택 품목인 무선 송수신 적외선 모듈을 지원합니다 .
섀시 침입 헤더 (2 핀 CI1) (1 페이지 , 19 번 항목 참조)		이 마더보드는 섀시 커버가 제거될 경우 이를 감지하는 케이스 열림 감지 기능을 지원합니다 . 이 기능을 사용하려면 섀시 침입 감지 설계가 적용된 섀시를 사용해야 합니다 .

TPM 헤더
(17 핀 TPMS1)
(1 페이지 , 21 번 항목 참조)



이 커넥터는 키 , 디지털 인증서 , 암호 및 데이터를 안전하게 보관할 수 있는 TPM(Trusted Platform Module) 시스템을 지원합니다 . TPM 시스템은 네트워크 보안을 강화하고 , 디지털 신원을 보호하며 플랫폼 무결성을 유지합니다 .

仕様

プラットフォーム	• マイクロ ATX フォームファクター • オール固体コンデンサー設計
CPU	• LGA1150 パッケージでは、第 4 世代の Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® をサポート • デジタル電源設計 • 4 電源フェーズ設計 • Intel® ターボブースト 2.0 テクノロジーをサポート
チップセット	• Intel® B85 • Intel® スモールビジネスアドバンテージ 2.0 をサポート
メモリ	• デュアルチャンネル DDR3 メモリテクノロジー • 2 x DDR3 DIMM スロット • DDR3 1600/1333/1066 ECC なし、アンバッファードメモリをサポート • システムメモリの最大容量： 16GB（注意を参照） • Intel® エクストリームメモリプロファイル（XMP）1.3/1.2 をサポート
拡張スロット	• 1 x PCI Express 3.0 x16 スロット（PCIE1： x16 モード） • 1 x PCI Express 2.0 x1 スロット • 1 x PCI スロット
グラフィックス	• Intel®HD グラフィックス内蔵ビジュアルおよび VGA 出力は、GPU に統合されたプロセッサーのみでサポートされます。 • Intel®HD グラフィックス内蔵ビジュアルをサポート： AVC、MVC (S3D)、MPEG-2 フル HW エンコード 1 の Intel® Quick Sync Video、Intel® InTru™ 3D、Intel® クリアビデオ HD テクノロジー、Intel® インサイダー ™、Intel® HD グラフィックス 4400/4600 • ピクセルシェーダー 5.0、DirectX 11.1 • 最大共有メモリ 1792MB • D-Sub をサポート。 最大解像度 1920x1200 @60Hz

音声	• 5.1 CH HD オーディオ（Realtek ALC662 オーディオコーデック） • TI® NE5532（最大 600 Ωのプレミアムヘッドセットアンプをサポート）
LAN	• PCIE x1 ギガビット LAN 10/100/1000 Mb/ 秒 • Realtek RTL8111G • ウェイクオンランをサポート • LAN ケーブル検出をサポート • エネルギー効率のよいイーサネット 802.3az をサポート • PXE をサポート
リアパネル I/O	• 1 x PS/2 マウスポート • 1 x PS/2 キーボードポート • 1 x パラレル用ポート • 1 x シリアル用ポート • 1 x D-Sub ポート • 4 x USB 2.0 ポート • 2 x USB 3.0 ポート • LED 付き 1 x RJ-45 LAN ポート（ACT/LINK LED と SPEED LED） • HD オーディオジャック： ラインイン / フロントスピーカー / マイク
ストレージ	• 4 x SATA3 6.0 Gb/ 秒コネクター、NCQ、AHCI、「ホットプラグ」機能をサポート • 2 x SATA2 3.0 Gb/ 秒コネクター、NCQ、AHCI、「ホットプラグ」機能をサポート
コネクター	• 1 x IR ヘッダー • 1 x シャーシイントルージョンヘッダー • 1 x TPM ヘッダー • 2 x CPU ファインコネクター（1 x 4 ピン、1 x 3 ピン） • 2 x シャーシファンコネクター（1 x 4 ピン、1 x 3 ピン） • 1 x 電源ファンコネクター（3 ピン） • 1 x 24 ピン ATX 電源コネクター • 1 x 8 ピン 12V 電源コネクター • 1 x 前面パネルオーディオコネクター • 2 x USB 2.0 ヘッダー（4 つの USB 2.0 ポートをサポート） • 1 x USB 3.0 ヘッダー（2 つの USB 3.0 ポートをサポート）

BIOS 機能	• 多言語 GUI サポート付きの 64Mb AMI UEFI Legal BIOS • ACPI 1.1 準拠のウェイクアップイベント • SMBIOS 2.3.1 をサポート • CPU、DRAM、PCH 1.05V、PCH 1.5V 複数電圧設定
サポート CD	• ドライバー、ユーティリティ、アンチウイルスソフトウェア（トライアル版）、CyberLink MediaEspresso 6.5 トライアル、Google Chrome ブラウザー、ツールバー、Start8
ハードウェアモニター	• CPU/ シャーシ / 電源温度センサー • CPU/ シャーシ / 電源ファンタコメーター • CPU/ シャーシ静音ファン（CPU 温度によるシャーシファン速度の自動調整可能） • CPU/ シャーシファンマルチ速度制御 • ケース開閉検知 • 電圧監視： +12V、+5V、+3.3V、CPU Vcore
OS	• Microsoft® Windows® 8 / 8 64 ビット / 7 / 7 64 ビット準拠
認証	• FCC、CE、WHQL • ErP/EuP Ready（ErP/EuP ready 電源が必要です）

1 简介

感谢您购买 ASRock B85M-GL 主板，这是按照 ASRock 一贯严格质量控制标准生产的性能可靠的主板。它提供符合 ASRock 质量和耐久性承诺的精良设计和卓越性能。

由于主板规格和 BIOS 软件可能已更新，因此，本文档的内容可能会随时更改，恕不另行通知。如果本文档有任何修改，则更新的版本将发布在 ASRock 网站上，我们不会另外进行通知。如果您需要与此主板相关的技术支持，请访问我们的网站以具体了解所用型号的信息。您也可以在 ASRock 网站上找到最新 VGA 卡和 CPU 支持列表。ASRock 网站 http://www.asrock.com。

1.1 包装清单

- ASRock B85M-GL 主板（Micro ATX 规格尺寸）
- ASRock B85M-GL 快速安装指南
- ASRock B85M-GL 支持光盘
- 2 x 串行 ATA (SATA) 数据线（选购）
- 1 x I/O 面板

1.2 规格

平台	• Micro ATX 规格尺寸 • 全固态电容器设计
CPU	• 支持 LGA1150 封装第 4 代 Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® • Digi Power（帝捷）设计 • 4 电源相设计 • 支持 Intel® Turbo Boost 2.0 技术
芯片集	• Intel® B85 • 支持 Intel® Small Business Advantage 2.0
内存	• 双通道 DDR3 内存技术 • 2 x DDR3 DIMM 槽 • 支持 DDR3 1600/1333/1066 非 ECC，非缓冲内存 • 支持系统内存容量： 16GB（见“注意”） • 支持 Intel® Extreme Memory Profile (XMP)1.3/1.2
扩充槽	• 1 x PCI Express 3.0 x16 槽 (PCIE1: x16 模式) • 1 x PCI Express 2.0 x1 槽 • 1 x PCI 槽
图形	• 只有 GPU 集成的处理器才支持 Intel® HD Graphics 内置视效和 VGA 输出。 • 支持 Intel® HD Graphics 内置视效 : Intel® 快速同步视频，采用 AVC、MVC (S3D) 和 MPEG-2 Full HW Encode1、Intel® InTru™ 3D、Intel® Clear Video HD 技术、Intel® Insider™、Intel® HD Graphics 4400/4600 • Pixel Shader 5.0、DirectX 11.1 • 最大共享内存 1792MB • 支持 D-Sub，60Hz 时最大分辨率达 1920x1200

音频	• 5.1 CH 高清音频（Realtek ALC662 音频编解码器） • TI® NE5532 （支持最高 600 Ohms 高品质耳机放大器）
LAN	• PCIE x1 Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111G • 支持 Wake-On-LAN（网上唤醒） • 支持网路綫侦测功能 • 支持高能效以太网 802.3az • 支持 PXE
后面板 I/O	• 1 x PS/2 鼠标端口 • 1 x PS/2 键盘端口 • 1 x 串行端口 : COM1 • 1 x 並行端口 (支持 ECP/EPP) • 1 x D-Sub 端口 • 4 x USB 2.0 端口 • 2 x USB 3.0 端口 • 1 x RJ-45 LAN 端口，带 LED（ACT/LINK LED 和 SPEED LED） • 高清音频插孔 : 线路输入 / 前扬声器 / 麦克风
存储	• 4 x SATA3 6.0 Gb/s 接口，支持 NCQ、AHCI 和“热插拔”功能 • 2 x SATA2 3.0 Gb/s 接口，支持 NCQ、AHCI 和“热插拔”功能
接口	• 1 x IR 接脚 • 1 x 机箱侵入接脚 • 1 x TPM 接脚 • 2 x CPU 风扇接口 (1 x 4 针 , 1 x 3 针) • 2 x 机箱风扇接口 (1 x 4 针 , 1 x 3 针) • 1 x 电源风扇接口 (3 针) • 1 x 24 针 ATX 电源接口 • 1 x 8 针 12V 电源接口 • 1 x 前面板音频接口 • 2 x USB 2.0 接脚（支持 4 个 USB 2.0 端口） • 1 x USB 3.0 接脚（支持 2 个 USB 3.0 端口）

BIOS 功能特点	• 64Mb AMI UEFI Legal BIOS，具有多语言 GUI 支持 • ACPI 1.1 兼容唤醒事件 • SMBIOS 2.3.1 支持 • CPU、DRAM、PCH 1.05V、PCH 1.5V 电压多次调整（Voltage Multi-adjustment）
支持光盘	• 驱动程序、实用程序、防病毒软件（试用版）、CyberLink MediaEspresso 6.5 试用版、Google Chrome 浏览器和工具栏、Start8
硬件监控	• CPU/ 机箱 / 电源温度感测 • CPU/ 机箱 / 电源风扇转速计 • CPU/ 机箱静音风扇（可以按照 CPU 温度自动调整机箱风扇速度） • CPU/ 机箱风扇多种速度控制 • CASE OPEN（机箱打开）检测
	• 电压监控：+12V、+5V、+3.3V、CPU Vcore
操作系统	• Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit 兼容
认证	• FCC、CE、WHQL • ErP/EuP 支持（需要支持 ErP/EuP 的电源）

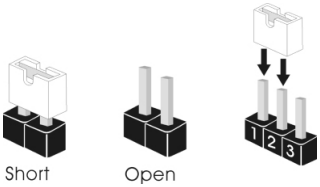
** 有关详细产品信息，请访问我们的网站：* *http://www.asrock.com*

须认识到超频会有一定风险，包括调整 BIOS 设置，应用“自由超频技术”，或使用第三方超频工具。超频可能会影响到系统的稳定性，甚至对系统的组件和设备造成损坏。执行这项工作您应自担风险和自己承担费用。我们对由于超频而造成的损坏概不负责。

由于限制原因，实际内存容量可能会小于 4GB，以保留给 Windows® 32-bit 操作系统下的系统使用。Windows® 64-bit 操作系统没有此类限制。您可以使用 ASRock XFast RAM 来利用 Windows® 不能使用的内存。

1.3 跳线设置

此图显示如何设置跳线。将跳线帽装到这些针脚上时，跳线 “短接”。如果这些针脚上没有装跳线帽，跳线 “开路”。此图显示 3 针跳线，当跳线帽装在针脚 1 和针脚 2 “上，它们短接”。



清除 CMOS 跳线 (CLRCMOS1) （见第 1 页，第 23 个）	1_2 默认	2_3 清除 CMOS

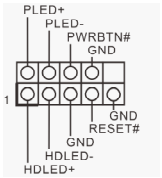
CLRCMOS1 允许您清除 CMOS 中的数据。要清除和重置系统参数到默认设置，请关闭计算机，从电源上拔下电源线插头。等候 15 秒后，使用跳线帽将 CLRCMOS1 上的针脚 2 和针脚 3 短接 5 秒。但是，请勿在更新 BIOS 后立即清除 CMOS。如果您需要在刚完成 BIOS 更新后清除 CMOS，则必须先启动系统，并在关闭后再执行清除 CMOS 操作。请注意，密码、日期、时间和用户默认配置文件只在卸下 CMOS 电池后才会被清除。

如果您清除 CMOS，机箱打开会被检测到。请将 BIOS 选项 “Clear Status”（清除状态）调整为清除前一个机箱侵入状态的记录。

1.4 板载接脚和接口

板载接脚和接口不是跳线。不要将跳线帽装到这些接脚和接口上。将跳线帽装到这些接脚和接口上将会对主板造成永久性损坏。

系统面板接脚
(9 针 PANEL1)
见第 1 页，第 15 个）



按照下面的针脚分配，将机箱上的电源开关、重置开关和系统状态指示灯连接到此接脚。在连接线缆前请记下正负针脚。

PWRBTN (** 电源开关 **):
连接到机箱前面板上的电源开关。您可以配置使用电源开关关闭系统的方式。

RESET (** 重置开关 **):
连接到机箱前面板上的重置开关。如果计算机死机，无法执行正常重新启动，按重置开关重新启动计算机。

***PLED**（系统电源 **LED**）：*
连接到机箱前面板上的状态指示灯。系统操作操作时，此 LED 亮起。系统处在 S1/S3 睡眠状态时，此 LED 闪烁。系统处在 S4 睡眠状态或关机 (S5) 时，此 LED 熄灭。

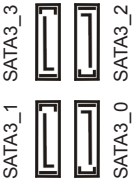
***HDLED**（硬盘活动指示灯）：*
连接到机箱前面板上的硬盘活动 LED 指示灯。硬盘正在读取或写入数据时，此 LED 亮起。

前面板设计根据机箱不同而有所差异。前面板模块主要包括电源开关、重置开关、电源 LED、硬盘活动 LED 指示灯、扬声器等。将机箱前面板模块连接到此接脚时，确保连线分配和针脚分配正确匹配。

串行 ATA2 接口
(SATA2_4:
见第 1 页，第 9 个)
(SATA2_5:
见第 1 页，第 8 个)

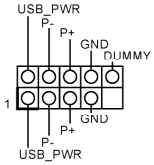
这两个 SATA2 接口支持最高 3.0 Gb/s 数据传输速率的内部存储设备的 SATA 数据线。

串行 ATA3 接口
(SATA3_0:
见第 1 页，第 11 个)
(SATA3_1:
见第 1 页，第 13 个)
(SATA3_2:
见第 1 页，第 10 个)
(SATA3_3:
见第 1 页，第 14 个)



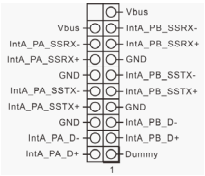
这四个 SATA3 接口支持最高 6.0 Gb/s 数据传输速率的内部存储设备的 SATA 数据线。

USB 2.0 接脚
(9 针 USB4_5)
(见第 1 页，第 17 个)
(9 针 USB6_7)
(见第 1 页，第 16 个)



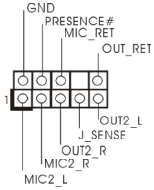
除 I/O 面板上的四个 USB 2.0 端口外，此主板上还有两个接脚。每个 USB 2.0 接脚可以支持两个端口。

USB 3.0 接脚
(19 针 USB3_2_3)
(见第 1 页，第 7 个)



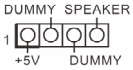
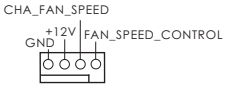
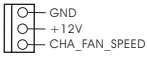
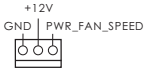
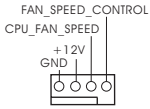
除 I/O 面板上的两个 USB 3.0 端口外，此主板上还有一个接脚。每个 USB 3.0 接脚可以支持两个端口。

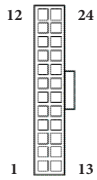
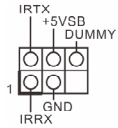
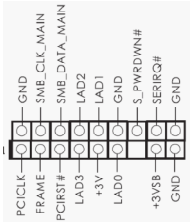
前面板音频接脚
(9 针 HD_AUDIO1)
(见第 1 页，第 22 个)



此接脚用于将音频设备连接到前音频面板。

1. *高清音频支持插孔感测，但机箱上的面板连线必须支持 HDA 才能正常工作。请按照我们的手册和机箱手册的说明安装系统。*
2. *如果您使用 AC'97 音频面板，请按照以下步骤安装到前面板音频接脚：*
   A. 将 Mic_IN (MIC) 连接到 MIC2_L.
   B。将 Audio_R (RIN) 连接到 OUT2_R，将 Audio_L (LIN) 连接到 OUT2_L.
   C。将接地端 (GND) 连接到接地端 (GND)。
   D. MIC_RET 和 OUT_RET 只用于高清音频面板。您不需要针对 AC'97 音频面板连接它们。
   E. 要启用前麦克风，请转到 Realtek 控制面板上的"FrontMic"（前麦克风）选项卡，调整 "Recording Volume"（录音音量）。

机箱扬声器接脚 (4 针 SPEAKER1) 见第 1 页，第 12 个）		请将机箱扬声器连接到此接脚。
机箱和电源风扇接口 (4 针 CHA_FAN1) 见第 1 页，第 18 个）		请将风扇线连接到风扇接口并使黑线匹配接地针脚。
(3 针 CHA_FAN2) 见第 1 页，第 24 个）		
(3 针 PWR_FAN1) 见第 1 页，第 1 个）		
CPU 风扇接口 (4 针 CPU_FAN1) 见第 1 页，第 3 个）		此主板提供 4 针 CPU 风扇（静音风扇）接口。如果您打算连接 3 针 CPU 风扇，请将它连接到脚 1-3。
(3 针 CPU_FAN2) 见第 1 页，第 2 个）		

ATX 电源接口 (24 针 ATXPWR1) (见第 1 页，第 6 个)		此主板提供 24 针 ATX 电源接口。要使用 20 针 ATX 电源，请沿针脚 1 和针脚 13 插接它。
ATX 12V 电源接口 (8 针 ATX12V1) (见第 1 页，第 4 个)		此主板提供 8 针 ATX 12V 电源接口。要使用 4 针 ATX 电源，请沿针脚 1 和针脚 5 插接它。
红外线模块接脚 (5 针 IR1) (见第 1 页，第 20 个)		此接脚支持选购的无线发射和接收红外线模块。
机箱侵入接脚 (2 针 CI1) (见第 1 页，第 19 个)		此主板支持 CASE OPEN（机箱打开）检测功能 - 检测机箱盖是否拆下。此功能需要采用侵入检测设计的机箱。
TPM 接脚 (17 针 TPMS1) (见第 1 页，第 21 个)		此接口支持 Trusted Platform Module（信任平台模块，TPM）系统，可以安全地存储密钥、数字证书、密码和数据。TPM 系统也可以帮助增强网络安全，保护数字身份和确保平台完整性。

電子信息產品污染控制標示

依据中国发布的「电子信息产品污染控制管理办法」及 SJ/T 11364-2006「电子信息产品污染控制标示要求」，电子信息产品应进行标示，藉以向消费者揭露产品中含有的有毒有害物质或元素不致发生外泄或突变从而对环境造成污染或对人身、财产造成严重损害的期限。依上述规定，您可于本产品之印刷电路板上看见图一之标示。图一中之数字为产品之环保使用期限。由此可知此主板之环保使用期限为 10 年。

图一

有毒有害物質或元素的名稱及含量說明

若您欲了解此产品的有毒有害物质或元素的名称及含量说明，请参照以下表格及说明。

部件名称	有害物质或元素					
	铅 (Pb)	镉 (Cd)	汞 (Hg)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板及电子组件	X	O	O	O	O	O
外部信号连接头及线材	X	O	O	O	O	O

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T 11363-2006 标准规定的限量要求以下。

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T 11363-2006 标准规定的限量要求，然该部件仍符合欧盟指令 2002/95/EC 的规范。

备注： 此产品所标示之环保使用年限，系指在一般正常使用状况下。

規格

平台	• Micro ATX 尺寸 • 全固態電容設計
CPU	• 支援第 4 代 Intel® Core™ i7 / i5 / i3 / Xeon® / Pentium® / Celeron® (LGA1150 封裝) • 數位電源設計 • 4 電源相位設計 • 支援 Intel® Turbo Boost 2.0 技術
晶片組	• Intel® B85 • 支援 Intel® Small Business Advantage 2.0
記憶體	• 雙通道 DDR3 記憶體技術 • 2 x DDR3 DIMM 插槽 • 支援 DDR3 1600/1333/1066 非 ECC、無緩衝記憶體 • 最大系統記憶體容量： 16GB （請參閱「注意」） • 支援 Intel® Extreme Memory Profile (XMP)1.3/1.2
擴充插槽	• 1 x PCI Express 3.0 x16 插槽（PCIE1： x16 模式） • 1 x PCI Express 2.0 x1 插槽 • 1 x PCI 插槽
顯示卡	• 僅限整合 GPU 的處理器才可支援 Intel® HD Graphics Built-in Visuals 及 VGA 輸出。 • 支援 Intel® HD Graphics Built-in Visuals： 轉換 AVC、MVC (S3D) 及 MPEG-2 Full HW Encode1 的 Intel® 高速影像同步轉檔技術、Intel® InTru™ 3D、Intel® Clear Video HD Technology、Intel® Insider™、Intel® HD Graphics 4400/4600 • Pixel Shader 5.0，DirectX 11.1 • 最大共用記憶體 1792MB • 支援最高達 1920x1200 @ 60Hz 解析度的 D-Sub
音訊	• 5.1 CH HD 音訊（Realtek ALC662 音訊轉碼器）功能 • TI® NE5532 (支援最高 600 Ohms 的 Premium Headset Amplifier)

LAN	• PCIE x1 Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111G • 支援網路喚醒 • 支援網路線偵測功能 • 支援 Energy Efficient Ethernet 802.3az • 支援 PXE
後面板 I/O	• 1 x PS/2 滑鼠連接埠 • 1 x PS/2 鍵盤連接埠 • 1 x 串列埠 • 1 x 並列埠 • 1 x D-Sub 連接埠 • 4 x USB 2.0 連接埠 • 2 x USB 3.0 連接埠 • 1 x RJ-45 LAN 連接埠，含 LED（ACT/LINK LED 及 SPEED LED） • HD 音訊插孔：線路輸入／前置喇叭／麥克風
儲存裝置	• 4 x SATA3 6.0 Gb/s 接頭，支援 NCQ、AHCI 及「熱插拔」功能 • 2 x SATA2 3.0 Gb/s 接頭，支援 NCQ、AHCI 及「熱插拔」功能
接頭	• 1 x IR 標頭 • 1 x 機殼防護標頭 • 1 x TPM 標頭 • 2 x CPU 風扇接頭 (1 x 4-pin、1 x 3-pin) • 2 x 機殼風扇接頭 (1 x 4-pin、1 x 3-pin) • 1 x 電源風扇接頭 (3-pin) • 1 x 24 pin ATX 電源接頭 • 1 x 8 pin 12V 電源接頭 • 1 x 前面板音訊接頭 • 2 x USB 2.0 標頭（支援 4 USB 2.0 連接埠） • 1 x USB 3.0 標頭（支援 2 USB 3.0 連接埠）
BIOS 功能	• 64Mb AMI UEFI Legal BIOS 含 多語 GUI 支援 • ACPI 1.1 符合喚醒自動開機 • 支援 SMBIOS 2.3.1 • CPU、DRAM、PCH 1.05V、PCH 1.5V 電壓多重調整

支援 CD	• 驅動程式、公用程式、防毒軟體（試用版）、CyberLink MediaEspresso 6.5 Trial、Google Chrome 瀏覽器及工具列、Start8
硬體監視器	• CPU／機殼／電源溫度感應 • CPU／機殼／電源風扇轉速計 • CPU／機殼靜音風扇（允許按照 CPU 溫度自動調整機殼風扇速度） • CPU／機殼風扇多重速度控制 • 機殼開啟偵測 • 電壓監控：+12V、+5V、+3.3V、CPU Vcore
作業系統	• 相容 Microsoft® Windows® 8 / 8 64 位元 / 7 / 7 64 位元
認證	• FCC、CE、WHQL • ErP/EuP Ready（需具備 ErP/EuP ready 電源供應器）

Spesifikasi

Platform	• Bentuk dan Ukuran Micro ATX • Desain Kapasitor Solid
CPU	• Mendukung Intel® Core™ i7 / i5 / i3 Generasi Ke-4 / Xeon® / Pentium® / Celeron® dalam Paket LGA1150 • Desain Digi Power • Desain 4 Fase Daya • Mendukung Teknologi Intel® Turbo Boost 2.0
Chipset	• Intel® B85 • Mendukung Intel® Small Business Advantage 2.0
Memori	• Teknologi Memori DDR3 Kanal Ganda • 2 x Slot DDR3 DIMM • Mendukung DDR3 1600/1333/1066 non-ECC, memori tanpa buffer • Kapasitas maksimum memori sistem: 16GB (lihat PERHATIAN) • Mendukung Intel® Extreme Memory Profile (XMP)1.3/1.2
Slot Ekspansi	• 1 x Slot PCI Express 3.0 x16 (PCIE1: x16 mode) • 1 x Slot PCI Express 2.0 x1 • 1 x Slot PCI
Grafis	• Intel® HD Graphics Built-in Visuals dan output VGA hanya didukung dengan prosesor yang terintegrasi GPU. • Mendukung Intel® HD Graphics Built-in Visuals: Intel® Quick Sync Video dengan AVC, MVC (S3D), dan MPEG-2 Full HW Encode1, Intel® InTru™ 3D, Teknologi Intel® Clear Video HD, Intel® Insider™, Intel® HD Graphics 4400/4600 • Pixel Shader 5.0, DirectX 11.1 • Memori bersama maksimum 1792MB • Mendukung D-Sub dengan resolusi maksimum hingga 1920x1200 @ 60Hz
Audio	• Audio HD 5.1 CH (Realtek ALC662 Audio Codec) • TI® NE5532 (mendukung Premium Headset Amplifier hingga 600 Ohms)

LAN	• PCIE x1 Gigabit LAN 10/100/1000 Mb/s • Realtek RTL8111G • Mendukung Wake-On-LAN • Mendukung Deteksi Kabel LAN • Mendukung Energy Efficient Ethernet 802.3az • Mendukung PXE
Panel I/O Belakang	• 1 x Port Mouse PS/2 • 1 x Port Keyboard PS/2 • 1 x Serial port: COM1 • 1 x Parallel port • 1 x Port D-Sub • 4 x Port USB 2.0 • 2 x Port USB 3.0 • 1 x Port LAN RJ-45 dengan LED (ACT/LINK LED dan SPEED LED) • Soket Audio HD: Saluran masuk/Speaker Depan/Mikrofon
Penyimpanan	• 4 x Konektor SATA3 6,0 Gb/s, mendukung fungsi NCQ, AHCI, dan "Hot Plug" • 2 x Konektor SATA2 3,0 Gb/s, mendukung fungsi NCQ, AHCI, dan "Hot Plug"
Konektor	• 1 x Header IR • 1 x Header Intrusi Chassis • 1 x Header TPM • 2 x Konektor kipas CPU (1 x 4-pin, 1 x 3-pin) • 2 x Konektor kipas chassis (1 x 4-pin, 1 x 3-pin) • 1 x Konektor kipas daya (3-pin) • 1 x Konektor daya ATX 24 pin • 1 x Konektor daya 12V 8 pin • 1 x Konektor audio panel depan • 2 x Header USB 2.0 (mendukung 4 port USB 2.0) • 1 x Header USB 3.0 (mendukung 2 port USB 3.0)
Fitur BIOS	• 64Mb AMI UEFI Legal BIOS dengan dukungan GUI Multibahasa • ACPI 1.1 Kompatibel dengan Aktivitas Pengaktifan • Dukugan SMBIOS 2.3.1 • Multipengatur Tegangan CPU, DRAM, PCH 1,05V, PCH 1,5V

Dukungan CD	• Driver, Utilitas, Perangkat Lunak AntiVirus (Versi Uji Coba), CyberLink MediaEspresso 6.5 Uji Coba, Google Chrome Browser dan Toolbar, Start8
Perangkat Keras Monitor	• Sensor Suhu CPU/Chassis/Kipas • Takometer CPU/Chassis/Kipas Daya • Kipas Hening CPU/Chassis (Memungkinkan Penyesuaian Otomatis Kecepatan Kipas Chassis Berdasarkan Suhu CPU) • Kontrol Multikecepatan Kipas CPU/Chassis • Deteksi CASE OPEN • Pemantauan Tegangan: +12V, +5V, +3,3V, CPU Vcore
OS	• Kompatibel dengan Microsoft® Windows® 8 / 8 64-bit / 7 / 7 64-bit
Sertifikasi	• FCC, CE, WHQL • Siap untuk ErP/EuP (memerlukan catu daya untuk ErP/EuP)

Contact Information

If you need to contact ASRock or want to know more about ASRock, you're welcome to visit ASRock's website at http://www.asrock.com; or you may contact your dealer for further information. For technical questions, please submit a support request form at http://www.asrock.com/support/tsd.asp

ASRock Incorporation

2F., No.37, Sec. 2, Jhongyang S. Rd., Beitou District,

Taipei City 112, Taiwan (R.O.C.)

ASRock EUROPE B.V.

Bijsterhuizen 3151

6604 LV Wijchen

The Netherlands

Phone: +31-24-345-44-33

Fax: +31-24-345-44-38

ASRock America, Inc.

13848 Magnolia Ave, Chino, CA91710

U.S.A.

Phone: +1-909-590-8308

Fax: +1-909-590-1026